SAMSUNG

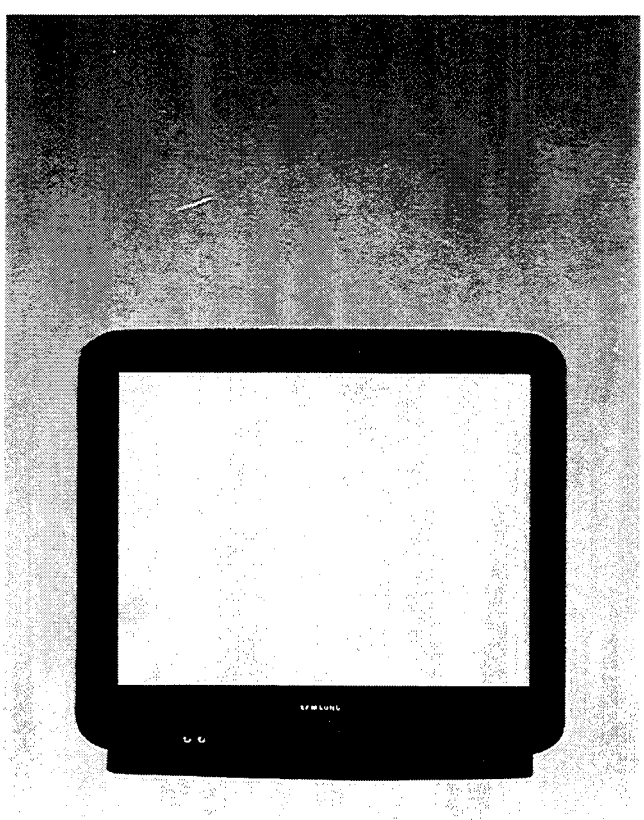
COLOR TELEVISION RECEIVER

CHASSIS : P1B
MODEL : CB5073T/UKV1CX
CB5073Z/UKVCX
CB5073T/UKV2CX

SAMS-00294

SERVICE Manual

COLOR TELEVISION RECEIVER



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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

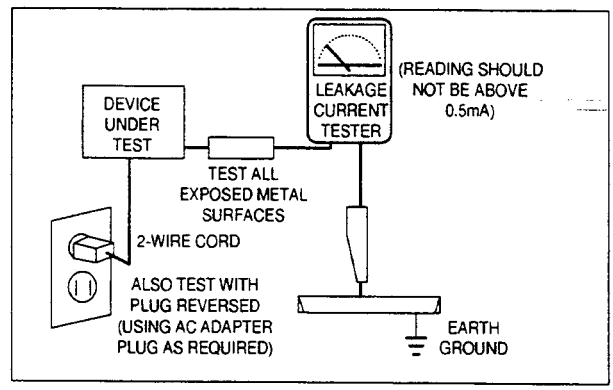
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people--particularly children--might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):
   Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances)*, and Underwriters Laboratories *(UL Publication UL1410, 59.7)*.

5. With the unit completely reassembled, plug the AC line cord directly the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.


DEVICE UNDER TEST
LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND
Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.

7. X-ray Limits:
   The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

8. High Voltage Limits:
   High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

   Heed the high voltage limits. These include the *X-ray Protection Specifications Label*, and the *Product Safety and X-ray Warning Note* on the service data schematic.

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

    To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity*. These units can be safely serviced *only* if an isolation transformer inserted between the receiver and the power source.

13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.

15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.
Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static"; these can accumulate sufficient electrical charge to damage ESDs.

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

Memo

2. Specifications and IC Data

2-1 Specifications

Television System:

MODEL	SYSTEM
CI	PAL-I (UHF)
CII	PAL-I (VHF/UHF)
CX	PAL-B/G, SECAM-B/G
CK	PAL-B/G, D/K, SECAM-B/G, D/K
CW	PAL-B/G, D/K, SECAM-B/G, D/K, NT 4.43

Channels:

System / Band	PAL/SECAM-B/G,I	PAL, SECAM-D/K	SECAM-K1, PAL-D	NTSC - M
VHF	2 - 12	1 - 13	2 - 9	2 - 13
UHF	21 - 69	21 - 69	13 - 57	14-69

Intermediate Frequencies (MHz) :

SYSTEM / IF Carrier Frequency	PAL/ SECAM- B/G	PAL/SECAM-D/K, SECAM-K1	PAL - I	NTSC - M
Picture IF Carrier	38.90	38.90	38.90	38.90
Sound IF Carrier	33.40	32.40	32.90	34.40
Color Sub Carrier	34.47	34.47	34.47	35.32

Picture Tube:

14 Inch	A34KQV42X	Quick start, In-line-gun, Black stripe, 90° degree deflection
20 Inch	A48KRD82X	
21 Inch	A51KQJ63X	

Power Requirements: AC 160~260V, 50Hz

Antenna Input Impedance: VHF, UHF : Telescopic dipole antenna (75 ohm unbalanced type)

Speaker Impedance: 8 ohm, 4W+4W (Dual type)
16 ohm, 3W (Monitor look type)

2-2 IC Line Up

Table 2-1 IC Line-Up

Loc. No	Specification	Description	Remark
HC101	PAP101	IF Pre-AMP	
HC801	HIS-0169B	Power Control IC	
IC201	M52309SP	PAL/NTSC Decoder (VIF/SIF/VIDEO, Chroma/Deflection)	MITSUBISHI
IC202	TDA4665	1H Delay	
IC203	TDA8395P	SECAM Decoder	
IC301	TA8445K	Vertical Output	
IC501	TDA6103Q	R.G.B Drive AMP	
IC601	TDA7056	Sound Output Amplifier	3Wx1CH
IC602	TDA7057AQ	Sound Output Amplifier	4Wx2CH
IC801	SMR40200	Power IC(STR)	220V/230V/240V
IC802	TDA8133	Regulator (5V, 8V)	
IC804	KA7805	Regulator (5V)	
IC805	KA7812	Regulator (9V)	
IC901	SZM-137PV	μ-com (Without TTX) OSD Language English, French, German, Italian, Swedish, Spanish	ZILOG (NON TTX)
	SZM-139AV	μ-com (Without TTX) OSD Language English, Arabian	
	SZM-143RV	μ-com (Without TTX) OSD Language English, Russian, Hungarian, Polish, Rumanian, Czech, Croatian	
	SZM-141TV	μ-com (Without TTX) OSD Language English, Thai, Vietnamese, Indonesian, Malay	
	SZM-145CV	μ-com (Without TTX) OSD Language English, Chinese	
	SPM-151	μ-com (With TTX) OSD Language English, Italian, Swedish, Spanish	PHILIPS (TTX)
	SPM-153	μ-com (With TTX) OSD Language English, French German, Dutch	
	SPM-161RV	μ-com (With TTX) OSD Language English, Russian, Hungarian, Polish	
	SPM-165CV	μ-com (With TTX) OSD Language English, Rumanian Czech, Croatian	
	SPM-163FV	μ-com (With TTX) OSD Language English, French (SEAM-L)	
IC902	X24C04P	Non-Volatile Memory	E²PROM
ICK01	TDA3845/TDA445B	SIF Detector	
ICL01	STV8225	AM SIF Cicruit	SECAM-L

2-3 Semiconductor Base Diagrams

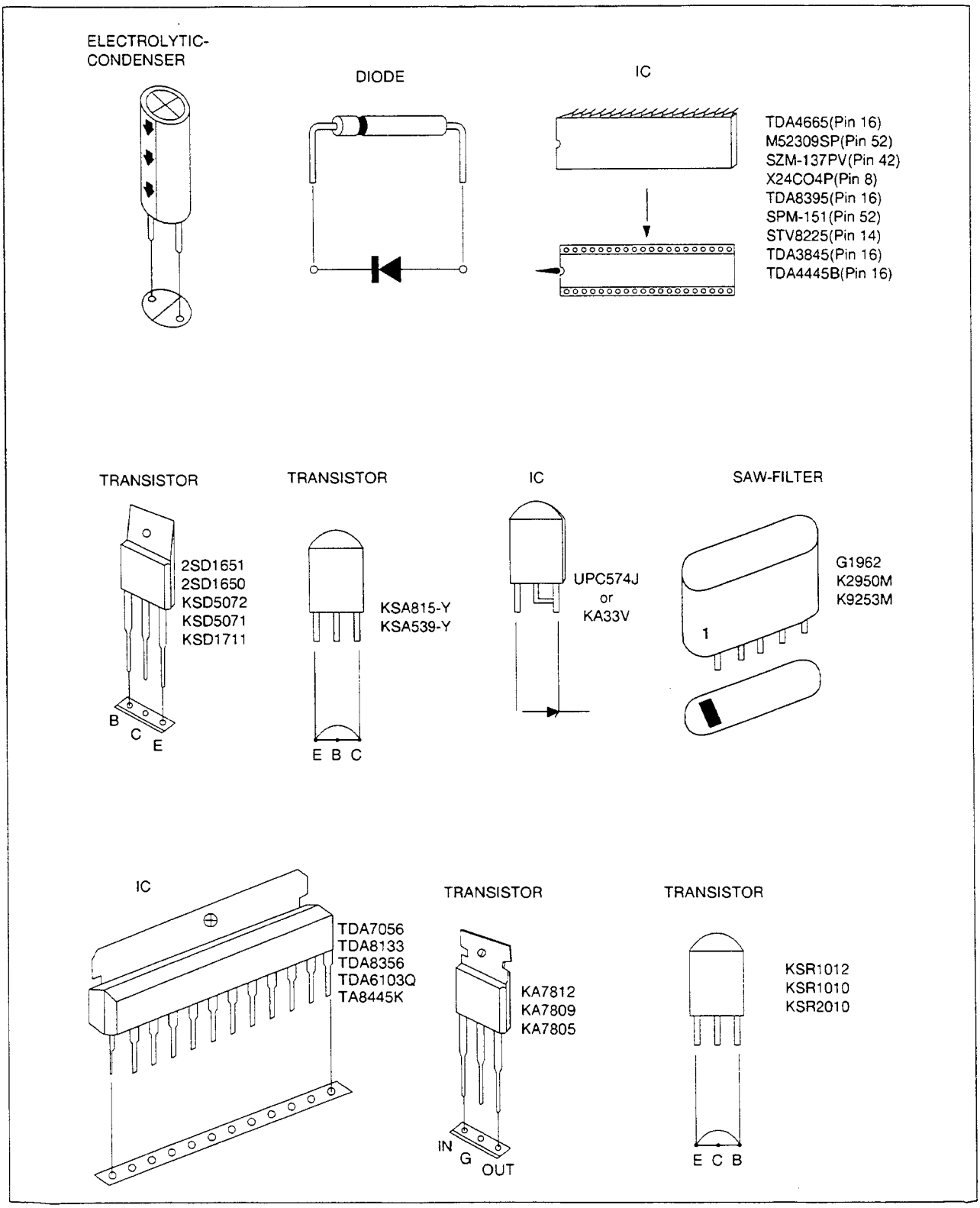
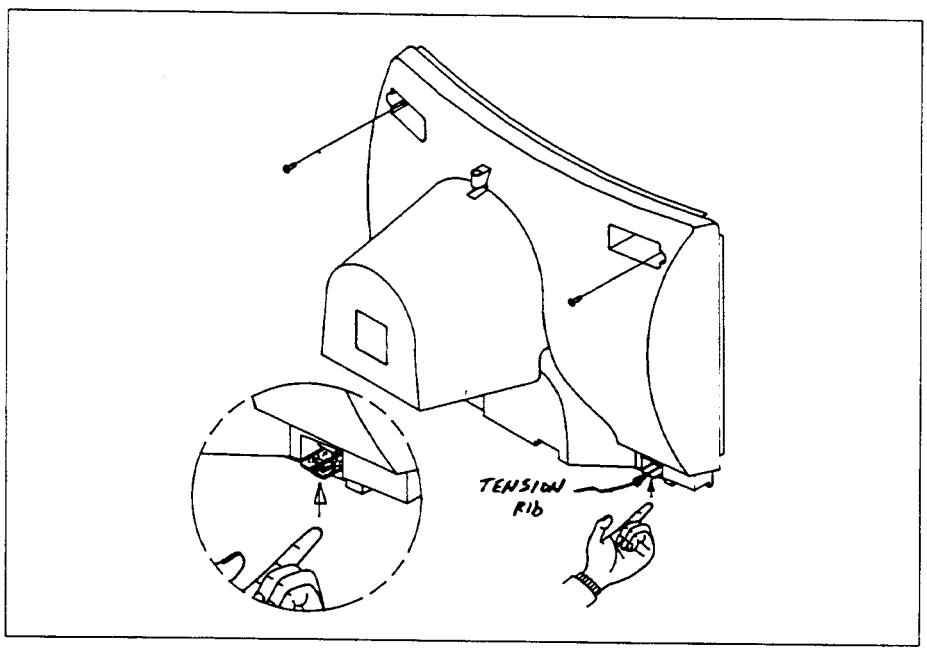


Fig.2-1 Semiconductor Base Diagrams

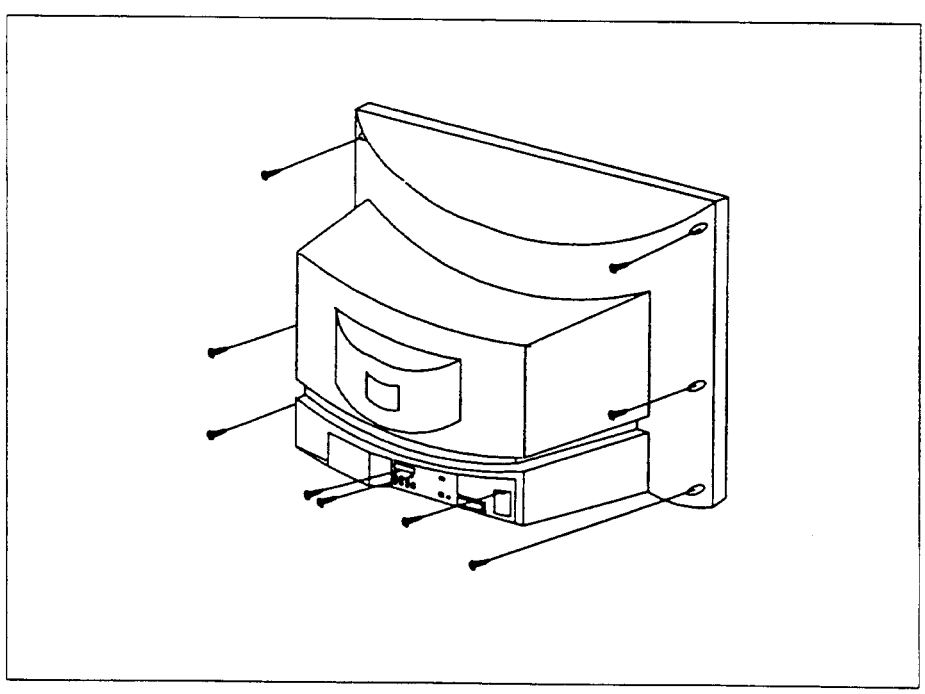
Memo

3. Disassembly and Reassembly

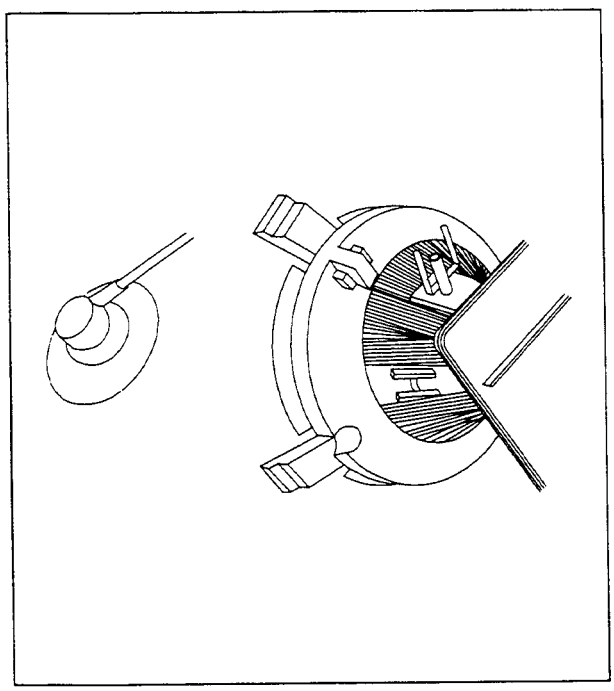
3-1 Back Cover Removal

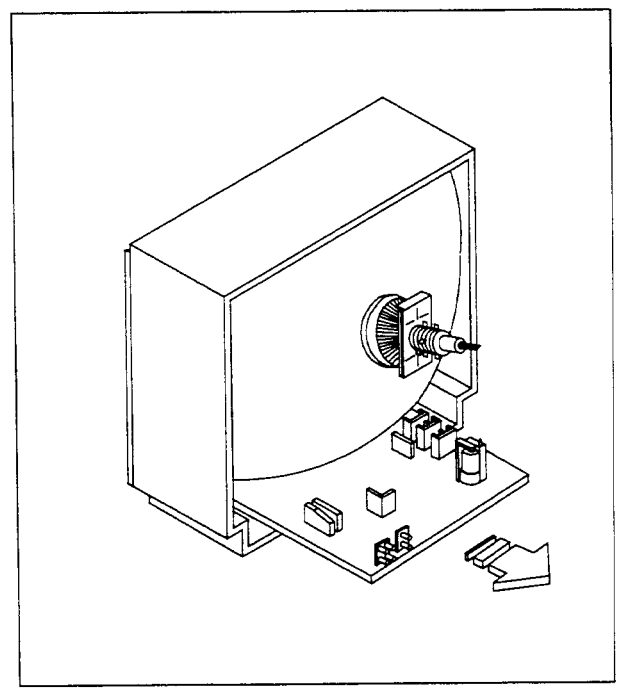


1. After removing the screws, press the tension rib and pull the cabinet backwards.
2. To reassemble, press the tension rib (See diagram).



3-2 Main Board Removal

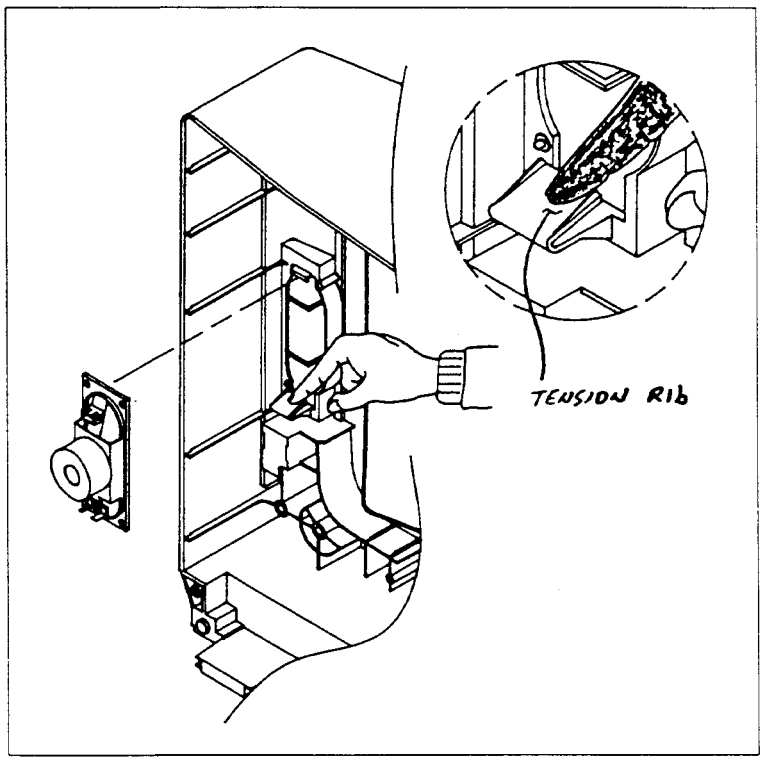




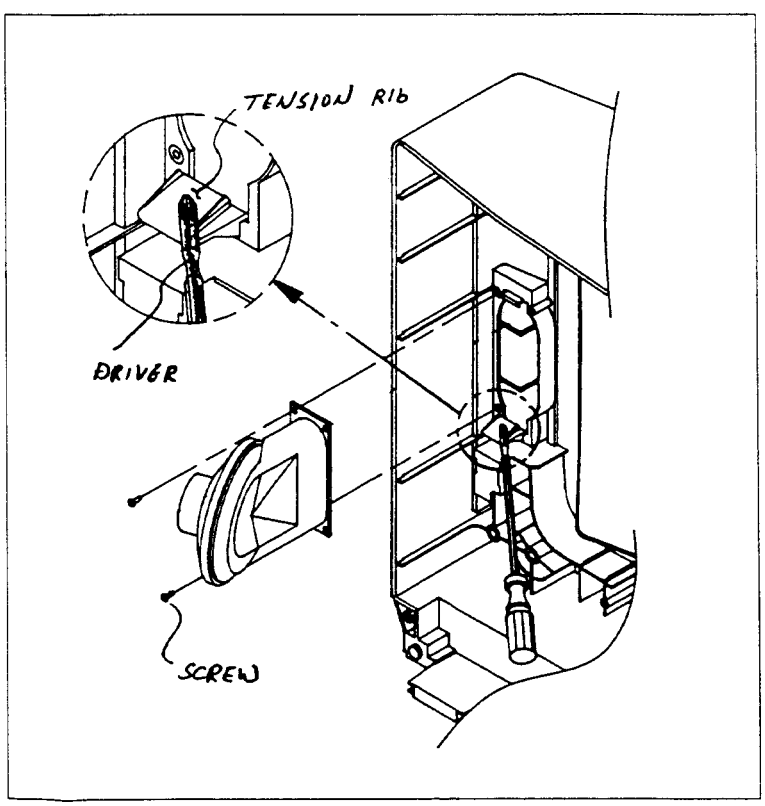
1. Separate the socket board from the CRT neck.
2. Remove the Anode Cap from the CRT.
3. Remove the main board by pulling it with both hands.

Warning: The FBT is charged with high voltage.
Before removing the Anode Cap, discharge the voltage through one of the heat sinks on the main board.

3-3 Speaker Removal

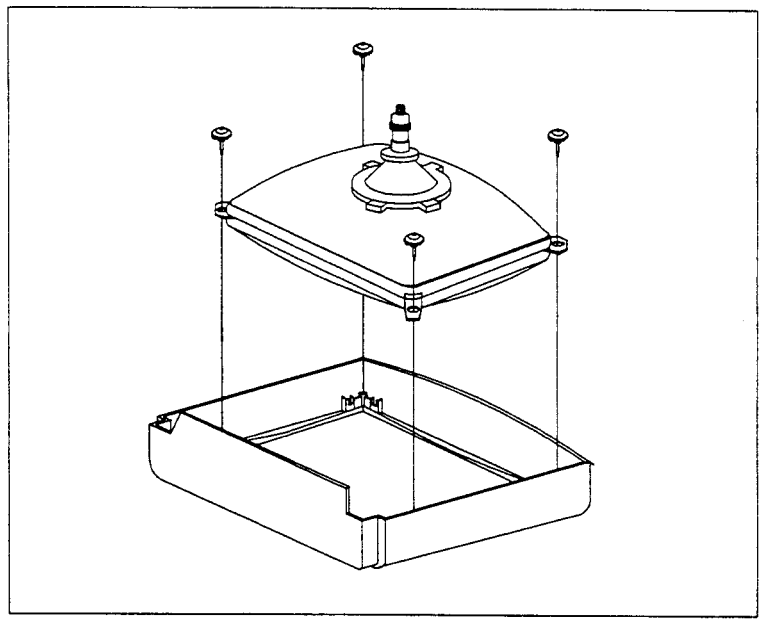


1. Remove the speaker by pressing the tension rib.



1. Remove the screws.
2. Remove the speaker by pressing the tension rib.

3-4 CRT Removal



1. Spread a soft mat on the floor. Place the TV set face down.

2. Remove the 4 nuts mounting the CRT to the front cabinet. Lift the CRT.

3. Caution: Because of the high vacuum and large surface area of the picture tube, be careful while handling it: (1) Always lift the picture tube by grasping it firmly around the faceplate, (2) Never lift the tube by its neck. (3) Do not scratch the picture tube or apply excessive pressure. Fractures of the glass may cause an implosion.

4. Alignment and Adjustment

4-1 Preadjustment

4-1-1 Factory Mode

1. Do not attempt these adjustments in the Video mode.

2. The Factory Mode adjustments are necessary when either the EEPROM (IC902) or the CRT is replaced.

3. Do not tamper with the "Adjustment" screen of the Factory Mode menu. This screen is intended only for factory use.

4-1-2 When EEPROM (IC902) Is Replaced

1. When IC902 is replaced all adjustment data revert to their initial values. It is necessary to re-program this data.

2. After IC902 is replaced, warm up the TV for 10 seconds

4-1-3 When CRT Is Replaced

1. Make the following adjustments AFTER setting up after setting up purity and convergence:

   White Balance
   Sub-Brightness
   Vertical Center (VR302)
   Vertical Size (VR301)
   Horizontal Size
   Fail Safe (This adjustment must be the last step.)

2. If the EEPROM or CRT is replaced, set PSL and PVA to 15 and 63 (Factory Mode). Then use VR301 and VR302 to adjust V-Size and V-Center.

4-2 Factory/Service Mode

4-2-1 Procedure for the "Adjustment" Mode

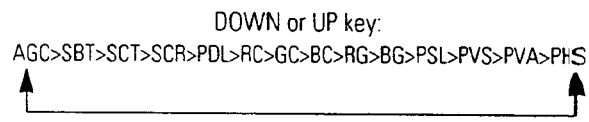
1. This mode uses the standard remote control. The Service Mode is activated by (1) pressing the "HIDDEN" service key on the local-keyboard, or (2) by entering the following remote-control sequence:

   STAND-BY → P.STD → HELP → SLEEP → POWER ON

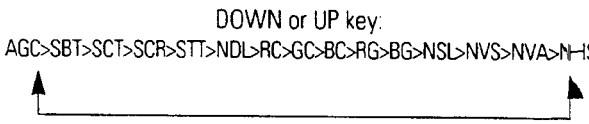
2. The "SERVICE (FACTORY)" message will be displayed. The Service Mode has four components: Adjustment, Test Pattern, Option Bytes and Reset.

3. Access the Adjustment Mode by pressing the "VOLUME" keys (Up or Down). The adjustment parameters are listed in the accompanying table, and selected by pressing the CHANNEL keys (▲,▼).

4. Selection sequences for the PAL system:



5. Selection sequences for the NTSC system:



6. The VOLUME keys increase or decrease the adjustment values, which are stored in the non-volatile memory when Adjustment mode is cancelled.

7. Cancel the Adjustment Mode by repressing the "HIDDEN" key or the "STATUS" key.

4-2-2 Main Adjustment Parameter

Table 4-1 Main Adjustment Parameter (Zilog μ-com) NON TTX			
FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	40
SUB BRIGHT	SBT	0 ~ 63 STEP	44
SUB CONTRAST	SCT	0 ~ 63 STEP	32
SUB COLOR	SCR	0 ~ 27 STEP	13
SUB TINT	STT	0 ~ 27 STEP	13
PAL DELAY	PDL	0 ~ 7 STEP	2
NTSC DELAY	NDL	0 ~ 7 STEP	2
RED CUTOFF	RC	0 ~ 254 STEP	0
GREEN CUTOFF	GC	0 ~ 254 STEP	0
BLUE CUTOFF	BC	0 ~ 254 STEP	0
RED-GREEN DRIVE GAIN	RG	0 ~ 63 STEP	32
BLUE-GREEN DRIVE GAIN	BG	0 ~ 63 STEP	32
PAL VERTICAL SLOPE	PSL	0 ~ 31 STEP	15
PAL VERTICAL SHIFT	PVS	0 ~ 15 STEP	6
PAL VERTICAL AMPLITUDE	PVA	0 ~ 63 STEP	32
PAL HORIZONTAL SHIFT	PHS	0 ~ 15 STEP	0
NTSC VERTICAL SLOPE	NSL	0 ~ 31 STEP	15
NTSC VERTICAL SHIFT	NVS	0 ~ 15 STEP	6
NTSC VERTICAL AMPLITUDE	NVA	0 ~ 63 STEP	32
NTSC HORIZONTAL SHIFT	NHS	0 ~ 15 STEP	0

NOTE : PVS,PVA, PHS, NVS, NVA,NHS parameters must be aligned using both the 50Hz and 60Hz vertical-field rates.

4-2-3 Test Pattern (Aging mode)

1. This mode can be used during servicing, or for confirming that the convergence and purity adjustments are correct.

2. Access the Test Pattern parameters by pressing a CHANNEL keys (▲, ▼) while the Service Mode is on. The cursor will move to the test pattern. Press the VOLUME keys. On-screen display:

   - RED
   - GREEN
   - BLUE

   NON-TTX MICOM ONLY

   - AGING

   TTX MICOM

3. AGING Mode (Reference Only)

   This pattern is used for pre-heating the CRT during manufacturing--it is accessed in the factory by twice pressing the "HIDDEN" key .

   Even if the TV power is cut off, the Aging Mode is not cancelled, The patterns are displayed at 5 sec intervals. The AGING mode is cancelled by repressing the "HIDDEN" key.

4-2-4 Option Bytes

In the Service Mode, various options can be selected via the Option Bytes (8 bits each). Example:

SYSTEM OSD DISPLAY	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0 : 8 -			L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)
BYTE 1 : 0 -	L (BIT :0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)

CS SYSTEM, ENGLISH OSD, SYSTEM OSD DISPLAY

BYTE 0 : 9	L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	H (BIT : 0	L (BIT : 1)

4-2-4 (a) For ASIA, Middle East and China:NON TTX Model

BYTE 0 TABLE

	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	128	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0	0

H : ENGLISH OSD ONLY
L : ENGLISH/MULTI LANGUAGE

H : PAL-B (CB) SYSTEM ONLY
L :

H : CW SYSTEM (PAL, SECAM, NTSC4.43)
L : CS SYSTEM (PAL, SECAM, NTSC4.43, NTSC3.58)

H : SYSTEM OSD DISPLAY
L : NO SYSTEM OSD DISPLAY

H : VIDEO MODE - NO CHANNEL OSD DISPLAY
L : VIDEO MODE - CHANNEL OSD DISPLAY

H : TDA7057AQ AUDIO MUTE
L : TDA7056 AUDIO MUTE

BYTE 1 TABLE

	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0

H : HYPER TUNER
L : CATV TUNER

H :
L :

H : AUTO MUTE
L : NO MUTE

H : AUTO POWER ON
L :

H : AUTO POWER OFF
L :

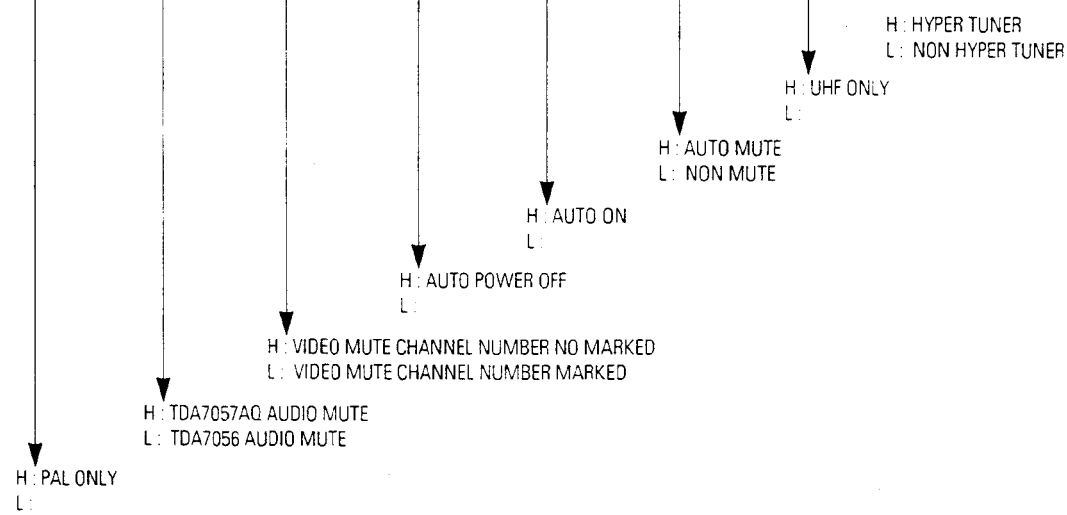
H : ANALOG AFT
L : BUS AFT

H : NO AFT SEARCH
L : AFT SEARCH

4-2-4 (b) For Europe, Oceania:NON TTX & TTX Model)

BYTE 0 TABLE

	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	128	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0	0


H : HYPER TUNER
L : NON HYPER TUNER
H : UHF ONLY
L :
H : AUTO MUTE
L : NON MUTE
H : AUTO ON
L :
H : AUTO POWER OFF
L :
H : VIDEO MUTE CHANNEL NUMBER NO MARKED
L : VIDEO MUTE CHANNEL NUMBER MARKED
H : TDA7057AQ AUDIO MUTE
L : TDA7056 AUDIO MUTE
H : PAL ONLY
L :

BYTE 1 TABLE

	BIT 0
HIGH VALUE	1
LOW VALUE	0

H : ENG ONLY
L : ENG/MULTI LANGUAGE

4-2-5 RESET

The Reset Mode is used during factory inspection.
Function Reset:

1.	Channels	Added/Erase
2.	Sort	Non
3.	Language	Basic (English)
4.	System	Auto (Non-TTX micom only)

4-3 Other Adjustments

4-3-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. Observe the picture for good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.
3. Use the specified test equipment or its equivalent.
4. Correct impedance matching is essential.
5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.
6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set has been moved or turned in a different direction, disconnect its AC power for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before removing power.

4-3-3 High Voltage Check

CAUTION:There is no high voltage adjustment on this chassis The B+power supply must be set to+125 volts(Full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. The high voltage should not exceed27.5KV.
4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 27.5KV under any conditions.

4-3-4 FOCUS Adjustment

1. Input a black and white signal.
2. Adjust the tuning control for the clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Screen Adjustment

1. Turn to the ACTIVE channel.
2. Adjust the VR screen for a normal picture is (no blooming or flyback line).
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke and tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set in as shown in Fig. 4-1.
4. Input a black and white signal.
5. Fully demagnetize the receive by applying an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 4-2).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

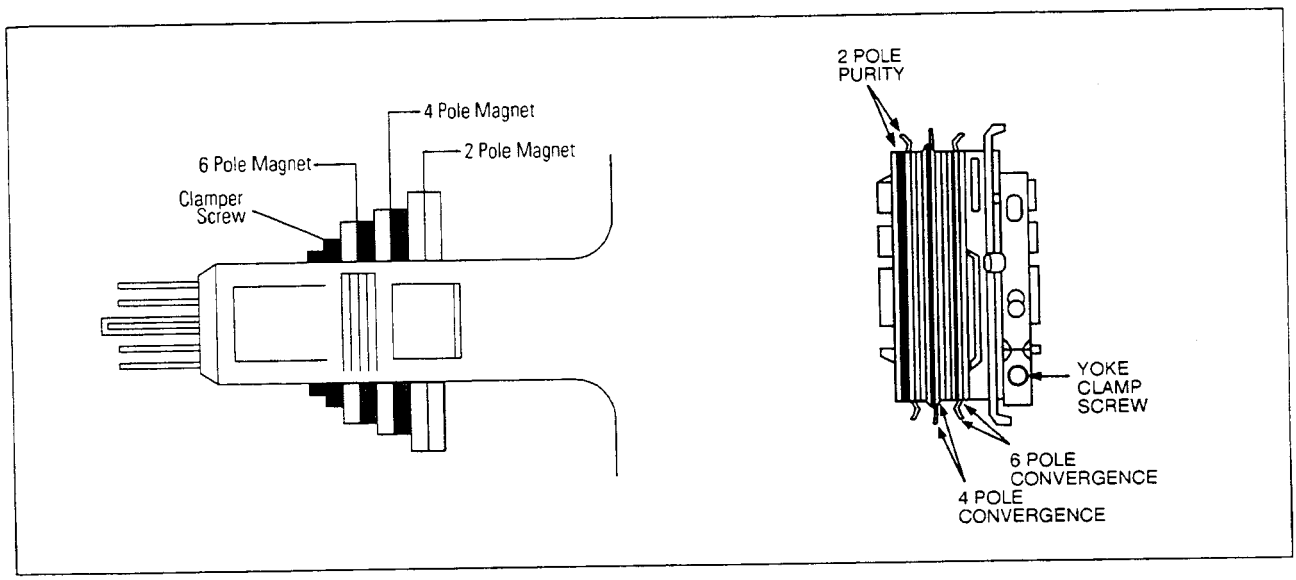


Fig. 4-1 Convergence Magnet Assembly

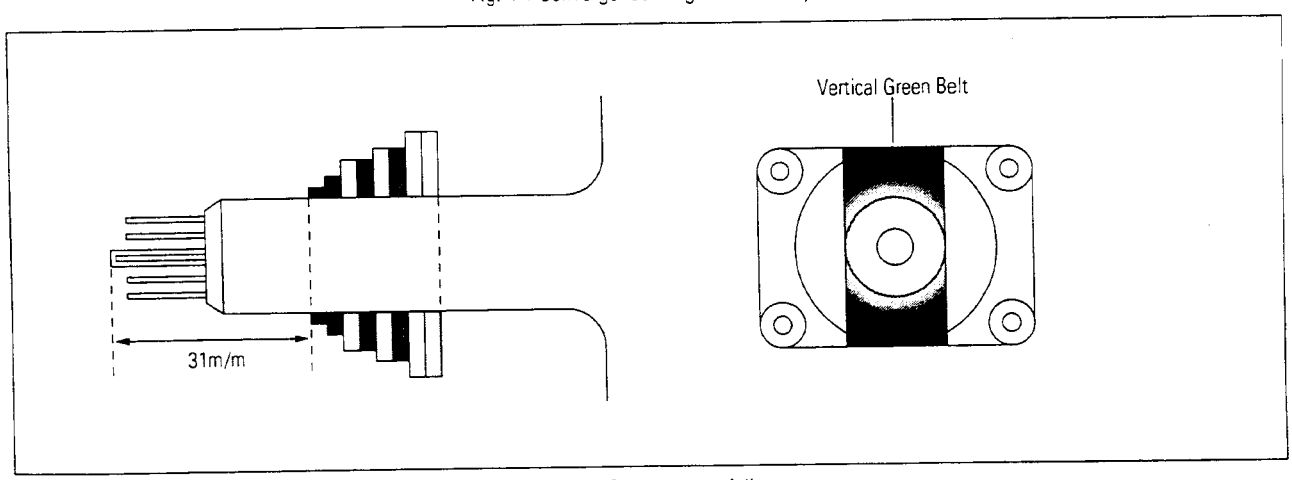


Fig. 4-2 Center Convergence Adjustment

4-3-7 White Balance Adjustment

4-3-7 (a) Low-light Adjustments:

1. Input either a lion head or a "pure white" pattern.
2. Warm up the TV for 30 minutes.
3. Check the data in the service mode:
   RC, GC, BC are 0, RG, BG should be 32 (initial data).
4. Enter Horizontal Line mode by pressing MUTE.
5. Adjust the Screen VR on the FBT so that a dim colored line (red,green or blue) appears on the screen.
6. Adjust RC, BC, GC until the dim-colored line becomes white.
7. Exit the Horizontal Line mode via the MUTE key.

4-3-7 (b) High-light Adjustments:

1. After making the low-ligh adjustments, input a high-light pattern.
2. Adjust RG,BG in the Service Mode.
3. Recheck in low light.

4-3-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.
3. Adjust the Brightness and Contrast controls for a well defined picture.
4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.
5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.
6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)
7. Repeat adjustments 2~6, if necessary.
8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 4-3).

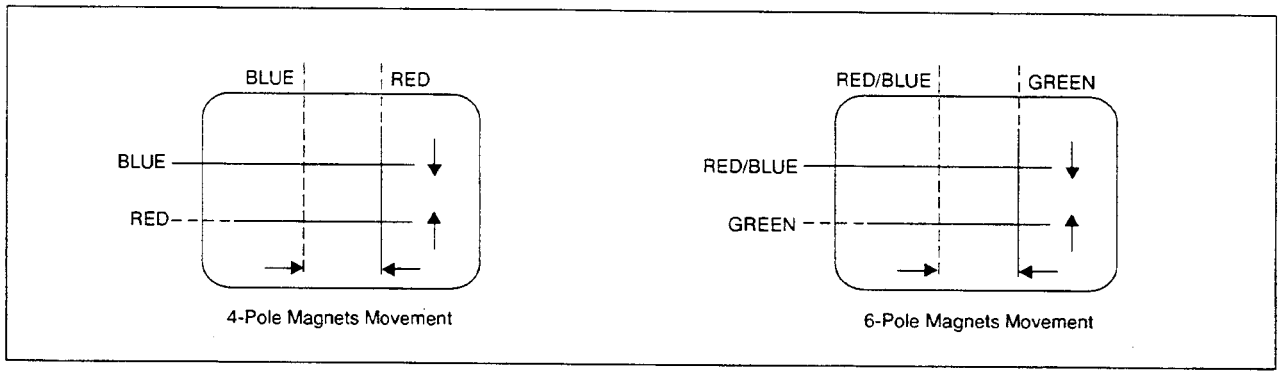


Fig 4-3 Center Convergence Adjustment

4-3-9 PIF Adjustment

1. Input a 38.9 MHz signal to the tuner (IF). Use a pattern generator (PM5518).
2. Connect DMM to IC101 Pin 1.
3. Turn T101 towards the right, and set it to 4.0 ± 0.3V.

4-3-10 SIF VCO Adjustment

1. Input a color bar pattern. Use a pattern generator without modulating the audio signal.
2. Set the oscilloscope to AC 2MV/DIV, 50NSEC/DIV. Adjust TK01 to get the maximum sine wave (probe 10:1). Connect the oscilloscope probe to Pin 2 (M52309SP).

4-3-11 RF AGC Adjustment

1. Input a VHF High channel (80dB).
2. Adjust the AGC in the Factory mode. Set Pin 4 to 2.5 ± 0.05V(DC).

4-3-12 Sub-Contrast Adjustment

1. Input a gray scale. (Use a pattern generator, PM5518).
2. Short D202, Switch off the ABL feedback.
3. Check GN501B G-OUT (use an oscilloscope).
4. Set RC,GC,BC data to 0 in the Factory Mode.
5. Adjust Sub-Contrast (SCT) in the Factory Mode. Set the black and white level to 2.7V ± 0.05Vp-p.
6. Remove the short across D202 and restore ABL.

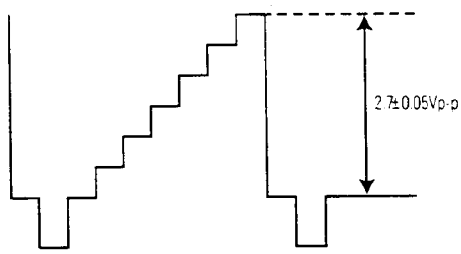


Fig. 4-4

4-3-13 Sub-Tint Adjustment (CW model)

1. Input NTSC color bars. (Use a pattern generator (PM5518.)
2. Check CN501B B-OUT (oscilloscope).
3. Adjust the 1st and the 2nd bars so that their heights are equal.

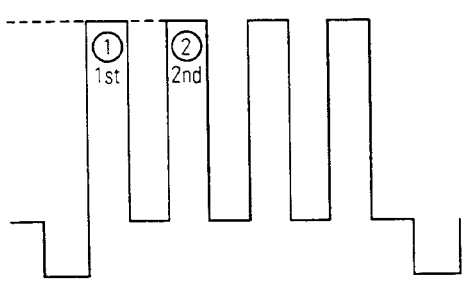


Fig. 4-5

4-3-14 Sub-Color Adjustment

1. Input a color bar pattern. (Use a pattern generator, PM5518.)
2. Check CN501B G-OUT with an oscilloscope.

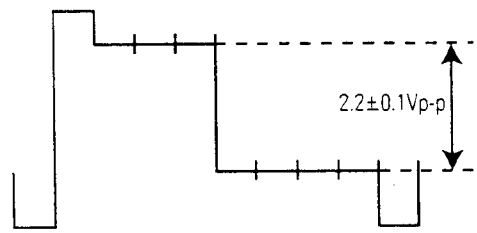


Fig. 4-6

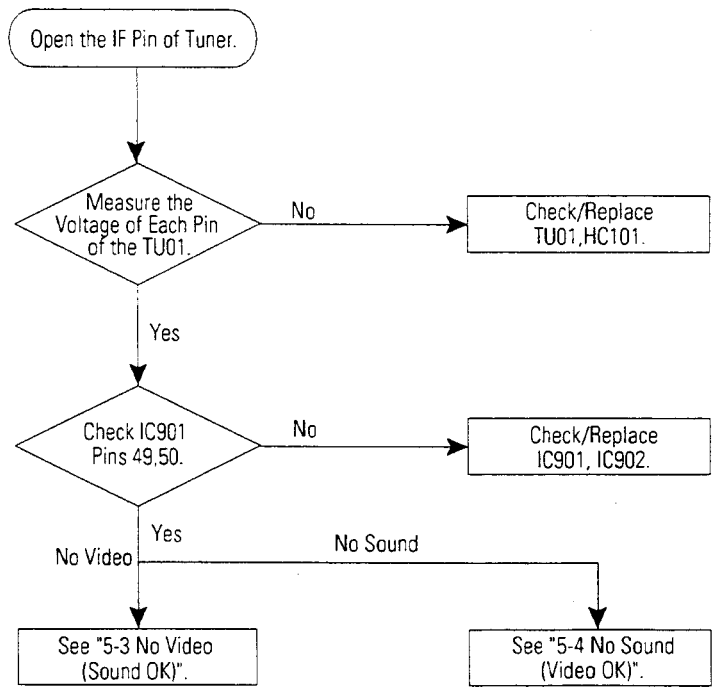
3. Short D202 and switch off the ABL feed-back.
4. Adjust SCR to 2.2V ± 0.1V in the Factory Mode.
5. Remove the short across D208 and restore the ABL.

4-3-15 Geometry Adjustment (V-Slope -> Size -> Center -> H-Phase)

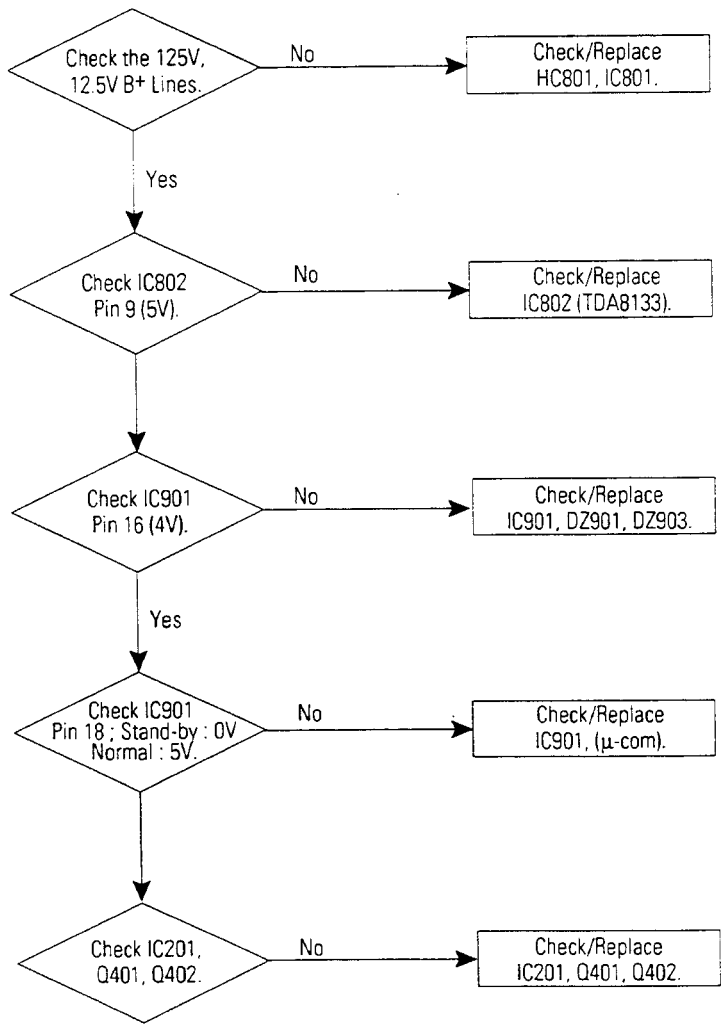
1. Input a lion head pattern.
2. Set PVA 63 data to PSL15 in the Factory Mode.
3. Change PHS to adjust the center of right and left figure.
4. Adjust VR302 so that the screen center and the CRT center are equal.
5. Adjust VR301 so that the up and downside are both 4.0.

5. Troubleshooting

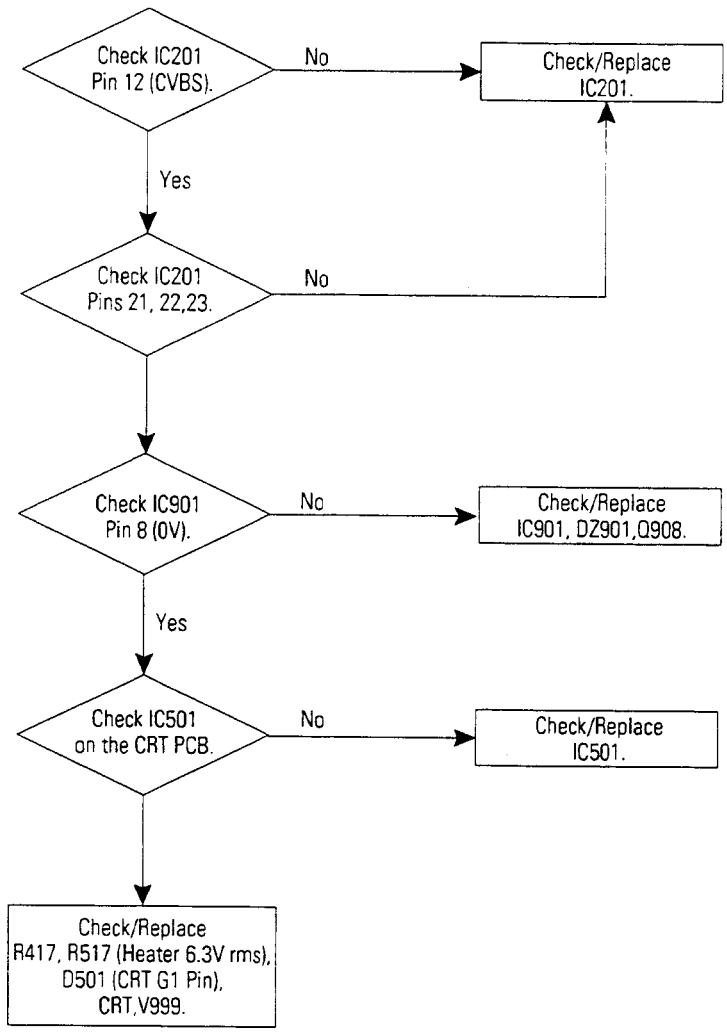
5-1 No Video (Raster On, No Sound)



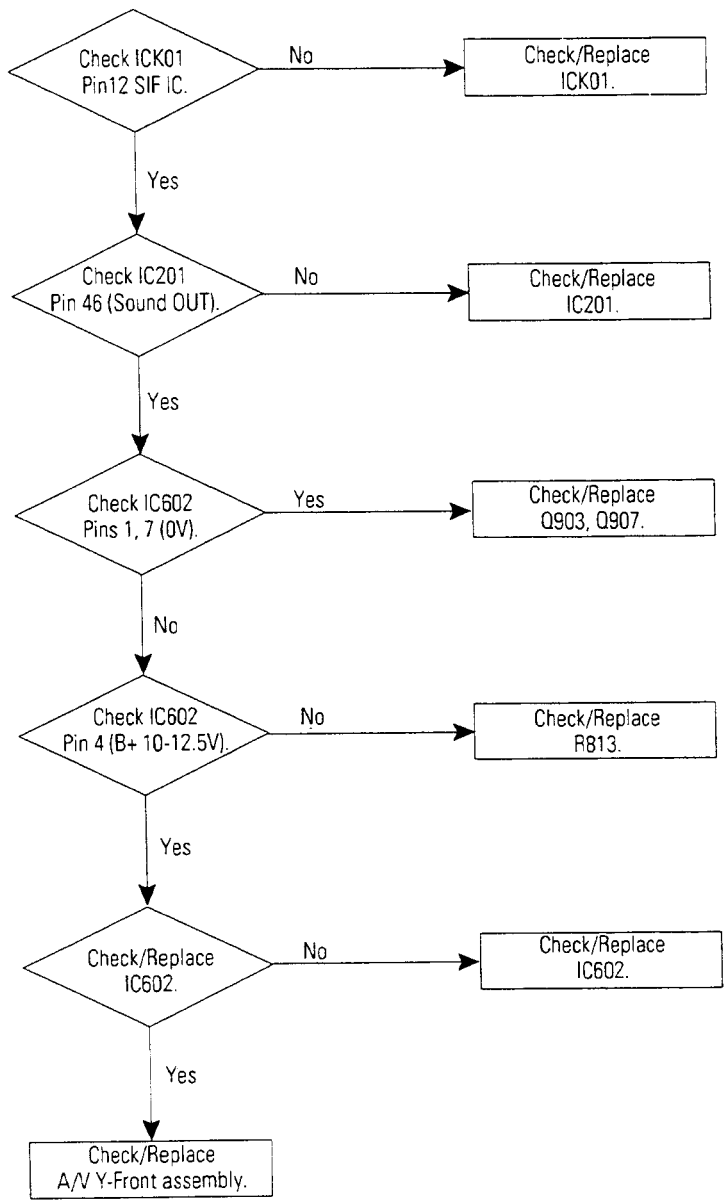
5-2 No Power


Check the 125V, 12.5V B+ Lines.
No
Check/Replace HC801, IC801.
Yes
Check IC802 Pin 9 (5V).
No
Check/Replace IC802 (TDA8133).
Check IC901 Pin 16 (4V).
No
Check/Replace IC901, DZ901, DZ903.
Yes
Check IC901 Pin 18 ; Stand-by : 0V Normal : 5V.
No
Check/Replace IC901, (μ-com).
Check IC201, Q401, Q402.
No
Check/Replace IC201, Q401, Q402.

5-3 No Video (Sound OK)



5-4 No Sound (Video OK)



7. Electrical parts

Loc No	Parts No	Description	Specification	Remark

CB5073T/UKV1CX OPTION

ASSY-PWB,MAIN(COMMON)

BUYER ; SEMUK (SEG)

	* 3X30-02622Y010	ASSY-PWB,MAIN(COMMON)	CB5073T/UKV1CX PV1	S.N.A
LOT00	36029-0516-000	P.C.B-MAIN	T1.6 W245 L245 PM1	S.N.A
C101	31607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C102	31607-402-160	C-ELECTROLYTIC	CE04W TAPG 50V 0.33UF	
C103	31607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M VENT	
C104	31607-902-250	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C108	31607-402-250	C-ELECTROLYTIC	CE04W TAPG 50V 10M	
C109	31417-344-104	C-CERAMIC,HK	CK45 TAPG F 50V 104-Z	
C201	31607-402-170	C-ELECTROLYTIC	CE04W TAPG 50V 0.1U-L,L	
C202	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C203	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C206	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C207	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C208	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C209	A1100-0802	C-CERAMIC	CG OA Y5R 16V T 332-M EP0	
C210	A1100-0908	C-CERAMIC	CK OA Y5R 16V T 182-M EP0	
C211	31507-127-017	C-POLYESTER	ECQ B1 H 682J F3	
C212	31507-127-010	C-POLYESTER	ECQ B1H 473J F3/2E 63V 47	
C214	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C215	31507-127-007	C-POLYESTER	ECQ B1 H 153J F3	
C216	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C217	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C218	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C219	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C220	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C221	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C222	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C226	31507-127-010	C-POLYESTER	ECQ B1H 473J F3/2E 63V 47	
C228	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
C229	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C230	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C231	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C232	31607-402-530	C-ELECTROLYTIC	CE04W TAPG 50V 0.47U-NP	
C233	A1100-0879	C-CERAMIC	CC OA SL 50V T 560-J UP05	
C234	A1100-0472	C-CERAMIC	CK OA Y5P 50V T 331-K UP0	
C235	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C236	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C237	A1100-0340	C-CERAMIC	CK OA Y5V 50V T 104-Z UP0	
C238	A1100-0340	C-CERAMIC	CK OA Y5V 50V T 104-Z UP0	
C239	31507-137-005	C-POLYESTER	ECQ-B 1 222J F3	
C240	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	

Loc No	Parts No	Description	Specification	Remark
C240	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
C251	A1100-0808	C-CERAMIC	CG CA Y5R 16V T 272-M EP0	
C252	31607-902-250	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C302	A1104-0740	C-ELEC	CE 04 -55/105 25V T 471-M	
C303	31607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C304	A1102-0302	C-FILM	CF 922 N 100V T 104-J -40	
C305	31507-127-000	C-POLYESTER	ECQ B1 H 102J F3	
C306	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
C307	A1104-0577	C-ELEC	CE 04 D 50V T 100-M RX 5X	
C308	31607-402-230	C-ELECTROLYTIC	CE04W TAPG 50V 3.3M	
C309	A1104-0562	C-ELEC	CE 04 D 25V T 102-M RX 16	
C310	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
⚠ C402	31519-400-005	C-M,POLYPROPYLENE	CFS 922M 1600V 0.0072-J	
C403	31417-767-102	C-CERAMIC,HIC	CK45(T) B2KV 102-K	INCH
⚠ C404	31516-400-020	C-M,POLYPROPYLENE	CFS922M TAPG 400V 434-J	
⚠ C405	31517-003-020	C-M,POLYESTER	CFS922M TAPG 400V 104-J	
C407	A1104-0561	C-ELEC	CE 04 D 35V T 101-M RX 10	
C408	31417-106-090	C-CERAMIC,HK	CK45 TAPG B 500V 471-K	
C409	A1104-0535	C-ELEC	CE 04 D 35V T 102-M RG 13	
C410	31607-401-670	C-ELECTROLYTIC	CE04W TAPG 25V 47M	
C411	31417-106-090	C-CERAMIC,HK	CK45 TAPG B 500V 471-K	
C412	A1104-0536	C-ELEC	CE 04 F 250V T 220-M RG 1	
C413	31507-127-008	C-POLYESTER	ECQ B1 H 223J F3	
C414	31607-401-670	C-ELECTROLYTIC	CE04W TAPG 25V 47M	
C415	A1104-0741	C-ELEC	CE 04 -40/105 250V T 2R2-	
⚠ C501	31517-390-502	C-M,POLYESTER	CFS922M TAPG 250V 104-J	
C503	A1100-0796	C-CERAMIC	CC CA SL 50V T 470-J UP05	
C504	A1100-0796	C-CERAMIC	CC CA SL 50V T 470-J UP05	
C505	A1100-0796	C-CERAMIC	CC CA SL 50V T 470-J UP05	
C506	A1100-0831	C-CERAMIC	CK 45 Z4V 3KV T 103-Z HCF	
C507	A1102-0291	C-FILM	CF 922 N 63V T 224-J -40/	
C508	31607-403-580	C-ELECTROLYTIC	CE04W TAPG 315V 2.2M-M(GA	
C509	31607-403-580	C-ELECTROLYTIC	CE04W TAPG 315V 2.2M-M(GA	
C601	A1100-0823	C-CERAMIC	CK CA Y5V 25V T 223-Z TP0	
C605	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C606	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C610	31607-401-670	C-ELECTROLYTIC	CE04W TAPG 25V 47M	
C611	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
C612	31607-402-530	C-ELECTROLYTIC	CE04W TAPG 50V 0.47U-NP	
C701	31607-803-730	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M-NP	
C702	31607-803-730	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M-NP	
C703	A1100-0798	C-CERAMIC	CK CA Y5P 50V T 101-K UP0	
C704	A1100-0803	C-CERAMIC	CG CA Y5V 25V T 103-Z TP0	
C705	A1100-0798	C-CERAMIC	CK CA Y5P 50V T 101-K UP0	
C706	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C707	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C708	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C801	A1104-0482	C-ELEC	CE 04 B 400V SN 221-M VEN	BLOC
C802	A1100-0991	C-CERAMIC	CK 45 Y5U 400VAC T 102-M	
C803	A1102-0331	C-FILM	CQ 922 P 800V T 222-J -25	
C804	31466-001-005	C-CERAMIC,AC	CK45P E400V 222-M(T4KV)	
C805	31417-901-400	C-CERAMIC,HIC	CK45(T) B2KV 561-K	
C806	31607-403-990	C-ELECTROLYTIC	CE04W TAPG 200V 100M-M(16	
C807	31417-901-400	C-CERAMIC,HIC	CK45(T) B2KV 561-K	

Loc No	Parts No	Description	Specification	Remark
C808	A1104-0472	C-ELEC	CE 04 -40/85 25V T 102-M	
C809	31607-401-690	C-ELECTROLYTIC	CE04W TAPG 25V 220M-M(SG)	
C810	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C811	31417-901-400	C-CERAMIC,HIC	CK45(T) B2KV 561-K	
C812	31607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M VENT	
C813	31607-401-670	C-ELECTROLYTIC	CE04W TAPG 25V 47M	
C814	A1102-0317	C-FILM	CFS 992 MPP 250V 474-M -4	
C816	31607-401-670	C-ELECTROLYTIC	CE04W TAPG 25V 47M	
C817	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C819	31607-401-710	C-ELECTROLYTIC	CED4W TAPG 25V 470M-M	
C820	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C851	31607-402-260	C-ELECTROLYNC	CE04W TAPG 50V 22M-M	
C852	A1100-0908	C-CERAMIC	CK OA Y5R 16V T 182-M EP0	
C853	31607-403-990	C-ELECTROLYTIC	CE04W TAPG 200V 100M-M(16	
C901	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C902	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C903	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C904	A1100-0338	C-CERAMIC	CK OA Y5P 50V T 102-K UP0	
C905	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C907	A1100-0340	C-CERAMIC	CK OA Y5V 50V T 104-Z UP0	
C908	31407-105-270	C-CERAMIC,TEMP	CC45(T) CH 50V 300-J	
C909	31407-105-270	C-CERAMIC,TEMP	CC45(T) CH 50V 300-J	
C910	A1102-0293	C-FILM	CF 922 N 63V T 474-J -40/	
C911	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C912	31407-105-700	C-CERMAIC,TEMP	CC45(T) CH 50V 151-J	
C913	31507-127-001	C-POLYESTER	ECQ B1 H 152J F3	
C914	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C915	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C916	31507-137-001	C-POLYESTER	ECQ-B 1 102J F3	
C917	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C918	31407-105-270	C-CERAMIC,TEMP	CC45(T) CH 50V 300-J	
C920	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
C921	A1100-0340	C-CERAMIC	CK OA Y5V 50V T 104-Z UP0	
CK01	A1100-0803	C-CERAMIC	CG OA Y5V 25V T 103-Z TP0	
CK03	31607-402-070	C-ELECTROLYTIC	CE04W TAPG 35V 22M	
CK04	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
CK05	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
CK06	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
CK07	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
CN201	33347-108-310	POST-HEADER	67094-003(AUTO)	
CN501	36434-0101-000	CONNECTOR ASSY	B8XB5,B3 500MM 1007#26	
CN601	33347-108-310	POST-HEADER	67094-003(AUTO)	
CN701	33347-110-110	POST-HEADER	67094-009 (AUTO)	
CN802	A1149-0013	COIL-DEGAUSSING	20INCH 13.5OHM T35 L2300M	DEGAU
CT01	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
CT02	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
CT03	A1100-0809	C-CERAMIC	CK OA Y5P 50V T 181-K UP0	
CT04	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
CT05	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
CU01	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
CW901	A1113-0018	C-NETWORK	CX MCCB1H101MX4YT 50V 101	
D101	32119-101-360	IC	KA 33V(TAPG)	
D201	32167-406-480	DIODE	1N4148 TAPG	
D202	32167-208-550	DIODE	ERC24-06	

Loc No	Parts No	Description	Specification	Remark
D204	32167-406-480	DIODE	1N4148 TAPG	
D205	32167-406-480	DIODE	1N4148 TAPG	
D301	32167-201-170	DIODE	TVR10G(TAPG)	
D401	32167-201-070	DIODE	1N 4003/LTIN 4003	
D402	32167-201-070	DIODE	1N 4003/LTIN 4003	
D403	32167-201-170	DIODE	TVR10G(TAPG)	
D404	32167-201-170	DIODE	TVR10G(TAPG)	
D405	32167-201-170	DIODE	TVR10G(TAPG)	
D501	32167-208-550	DIODE	ERC24-06	
D701	32167-406-480	DIODE	1N4148 TAPG	
⚠ D800	A1330-0038	VARISTOR	INR10D471-SVC471D-10A 470	
D801	B4104-0108	DIODE-RECT	D2SB60-4104 600V 1.5A ST	
D802	B4102-0068	DIODE-FR	RU20A 600V 1.5A 400NS T	
D901	32167-406-080	DIODE-ZENER	MTZ 5.1B	
D902	32167-406-480	DIODE	1N4148 TAPG	
D903	32167-406-480	DIODE	1N4148 TAPG	
D904	32167-406-480	DIODE	1N4148 TAPG	
D905	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
D910	32167-406-080	DIODE-ZENER	MTZ 5.1B	
D911	32167-201-070	DIODE	1N 4003/LTIN 4003	
D912	32167-406-480	DIODE	1N4148 TAPG	
DZ105	32167-406-140	DIODE-ZENER	MTZ10	
DZ106	32167-406-140	DIODE-ZENER	MTZ10	
DZ107	32167-406-140	DIODE-ZENER	MTZ10	
DZ201	32167-406-080	DIODE-ZENER	MTZ 5.1B	
DZ202	32167-406-080	DIODE-ZENER	MTZ 5.1B	
DZ301	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ302	32167-406-270	DIODE-ZENER	MTZ39B	
DZ303	32167-406-270	DIODE-ZENER	MTZ39B	
DZ401	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ701	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ702	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ703	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ704	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ705	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ801	32167-401-880	DIODE-ZENER	R2KN(TAPG)	
DZ901	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ902	32167-406-080	DIODE-ZENER	MTZ 5.1B	
DZ903	32167-441-009	DIODE-ZENER	MTZ7.5C	
DZ904	32167-406-080	DIODE-ZENER	MTZ 5.1B	
DZ905	32167-406-080	DIODE-ZENER	MTZ 5.1B	
⚠ F801	34709-084-730	FUSE	FST 250V 3.15A 20MM SEMKO	
GT01	33054-834-021	CONNECTOR-ASSY	P1XP1,1015#22,300MM	
HC101	A4010-0073	IC-HYBRID	PAP101 PREAMP SIP BULK 6P	
HC301	A4010-0089	IC-HYBRID	VPG101 VER.PULSE GEN SIP	
HC801	A4010-0090	IC-HYBRID	HIS-0169B CTV SIP BULK SM	
IC201	B4012-0595	IC-LINEAR	M52309SP-N3(WHT) SDIP STI	
IC202	B4012-0361	IC-LINEAR	TDA4665 DIP 16P VIDEO	
⚠ IC804	A4008-1092	IC-VOLT REGU	KA7805A TO-220AB 1A 0/125	
⚠ IC805	A4008-0178	IC-VOLT REGU	KA7812A TO-220AB	
IC901	B4002-0760	IC-MCU	SAA5290ZP-013(SPM-153GV)	MICOM
IC902	B4000-0135	IC-EEPROM	AT24C04-10PC DIP 8P	
ICK01	B4012-0574	IC-LINEAR	TDA4445B DIP STICK GUASI-	
J260	A1102-0293	C-FILM	CF 922 N 63V T 474-J -40/	

Loc No	Parts No	Description	Specification	Remark
JS701	A3040-0182	JACK-SCART	USJ-1 12P ST	
L101	32427-904-919	COIL-PEAKING	AL02-1R2K	
L102	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
L201	32427-904-922	COIL-PEAKING	AL02-5R6K	
L202	32427-904-922	COIL-PEAKING	AL02-5R6K	
L203	32427-904-923	COIL-PEAKING	AL02-8R2K	
L205	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
L301	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
L401	32446-705-050	COIL-LINEARITY	195UH ST	
L402	B1133-0009	COIL-FILTER	100UH-K AX SPT0508A Q10 F	
L403	32429-833-020	COIL-PEAKING	6.8MH-K	
L404	A1247-0054	FILTER-EMI BEAD	HF70ZBF3.5X5x0.8 SB 30OHM	
L701	A1132-0091	COIL-PEAKING	4.7UH-K AX AL02TB4R7K Q40	
L702	A1132-0091	COIL-PEAKING	4.7UH-K AX AL02TB4R7K Q40	
L703	A1132-0091	COIL-PEAKING	4.7UH-K AX AL02TB4R7K Q40	
L704	A1247-0054	FILTER-EMI BEAD	HF70ZBF3.5X5x0.8 SB 30OHM	
L801	32429-633-090	COIL-LINE,FILTER	39MHX2(U)	
L802	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L803	B1160-0067	INDUCTOR	580UH-K RT RS207 P10.35	
L805	A1247-0054	FILTER-EMI BEAD	HF70ZBF3.5X5x0.8 SB 30OHM	
L806	32427-904-943	COIL-PEAKING	AL03-102J	
L807	A1247-0054	FILTER-EMI BEAD	HF70ZBF3.5X5x0.8 SB 30OHM	
L808	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L809	B1133-0009	COIL-FILTER	100UH-K AX SPT0508A Q10 F	
L901	32427-904-922	COIL-PEAKING	AL02-5R6K	
L902	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
L904	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
L906	B1247-0051	FILTER-EMI BEAD	BL02RN2-R62T4 DB 1.1UH/1M	
L907	A1247-0054	FILTER-EMI BEAD	HF70ZBF3.5X5x0.8 SB 30OHM	
LD901	3H77-00001-070	ASSY-LED,GUIDE	32309-121-005,DL-G5RGA	
NT801	A1334-0019	THERMISTOR	KL11L4R7 4.7OHM/25DEG 23M	
⚠ P/CORD	A6006-0252	POWER-CORD	KKJ-1004A H03VVH2-F(2X0.7	
⚠ P801	32189-609-430	POSISTOR	2C14R(D)	
Q201	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q251	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
⚠ Q402	32137-301-560	TRANSISTOR	KSC 2331-Y(TAPG)	
Q701	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q702	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q703	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q901	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q902	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q903	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q904	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
Q905	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
Q906	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
Q907	A4060-0038	TR-W/RESISTOR	KSR1012 300MW 100MA 40V B	
Q908	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
Q909	A4060-0038	TR-W/RESISTOR	KSR1012 300MW 100MA 40V B	
QT01	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
QT02	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
QT03	A4060-0033	TR-W/RESISTOR	KSR1010 300MW 100MA 40V B	
R101	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R102	31018-177-274	R-CARBON	RD 1/8T 270K-J	
R103	31018-177-274	R-CARBON	RD 1/8T 270K-J	

Loc No	Parts No	Description	Specification	Remark
R201	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
R202	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R203	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R205	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R206	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R207	31018-177-395	R-CARBON/METAL FILM	RD 1/8T 3.9M-J	
R208	31018-177-682	R-CARBON/METAL FILM	RD 1/8T 6.8K-J	
R209	A1006-0846	R-METAL FILM	RM 1/8 T 793-F	
R210	31018-177-123	R-CARBON/METAL FILM	RD 1/8T 12K-J	
R211	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R212	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R213	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R214	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R215	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R216	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R217	31018-177-224	R-CARBON/METAL FILM	RD 1/8T 220K-J	
R218	31018-177-105	R-CARBON/METAL FILM	RD 1/8T 1M-J	
R219	31018-177-221	R-CARBON/METAL FILM	RD 1/8T 220-J	
R220	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R221	31018-177-511	R-CARBON/METAL FILM	RD 1/8T 510-J	
R223	31018-177-560	R-CARBON/METAL FILM	RD 1/8T 56-J	
R224	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R225	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R226	31018-177-224	R-CARBON/METAL FILM	RD 1/8T 220K-J	
R227	31018-177-153	R-CARBON/METAL FILM	RD 1/8T 15K-J	
R228	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R229	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R230	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R231	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R232	31018-177-684	R-CARBON/METAL FILM	RD 1/8T 680K-J	
R233	31018-377-221	R-CARBON/METAL FILM	RD 1/2T 220-J	
R234	31018-177-754	R-CARBON	RD 1/8T 750K-J	
R235	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R236	31018-177-100	R-CARBON/METAL FILM	RD 1/8T 10-J	
R237	31018-177-100	R-CARBON/METAL FILM	RD 1/8T 10-J	
R238	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R251	31018-177-363	R-CARBON/METAL FILM	RD 1/8T 36K-J	
R252	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R253	A1000-0861	R-CARBON	RD 1/8 T 565-J 5.6M	
R302	31018-377-391	R-CARBON/METAL FILM	RD 1/2T 390-J	
R303	31018-377-189	R-CARBON/METAL FILM	RD 1/2T 1.8-J	
R304	31018-177-221	R-CARBON/METAL FILM	RD 1/8T 220-J	
R305	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R306	A1004-0418	R-METAL OXIDE	RS 1 RT(S) 331-J 330R 6.5	
R307	31018-177-153	R-CARBON/METAL FILM	RD 1/8T 15K-J	
R309	31018-177-114	R-CARBON/METAL FILM	RD 1/8T 110K-J	
R311	31018-177-302	R-CARBON/METAL FILM	RD 1/8T 3K-J	
R311	A1006-0846	R-METAL FILM	RM 1/8 T 793-F	
R312	31018-377-391	R-CARBON/METAL FILM	RD 1/2T 390-J	
R313	A1006-0672	R-METAL FILM	RM 1/2 T(S) 682-F 6.8K	
R401	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R402	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R403	31018-377-271	R-CARBON/METAL FILM	RD 1/2T 270-J	
⚠ R404	31046-567-100	R-METAL,OXIDE	RS 2T 10-J(AUTO)	

Loc No	Parts No	Description	Specification	Remark
R405	A1004-0404	R-METAL OXIDE	RS 2 RT(S) 102-J 1K	
R406	A1004-0428	R-METAL OXIDE	RS 2 RT(S) 470-J 47R	
⚠ R407	31049-375-114	R-METAL,FILM	RM 1/2T 110K-F	
R408	A1000-0785	R-CARBON	RD 1/2 T(S) 430-J 43R	
R409	A1010-0036	R-FUSIBLE	RF 1/2 RT(S) R22-K	
R410	A1010-0035	R-FUSIBLE	RF 1/2 RT(S) 010-J	
⚠ R411	31049-375-114	R-METAL,FILM	RM 1/2T 110K-F	
R412	A1004-0437	R-METAL OXIDE	RS 2 RT(S) 270-J 27R	
R413	A1000-0660	R-CARBON	RD 1/2 T(S) R39-K 0.39R	
R414	31018-377-330	R-CARBON/METAL FILM	RD 1/2T 33-J	
R415	31018-377-561	R-CARBON/METAL FILM	RD 1/2T 560-J	
R416	A1004-0428	R-METAL OXIDE	RS 2 RT(S) 470-J 47R	
⚠ R417	31057-477-109	R-FUSIBLE	RF 1T 1.0-J/RF 1S 1.0-J	
R418	A1010-0063	R-FUSIBLE	RF 2 RT 151-J	
⚠ R419	31057-002-040	R-FUSIBLE	RF 1/2T 68-J	
R420	A1000-0785	R-CARBON	RD 1/2 T(S) 430-J 43R	
⚠ R501H	31028-328-472	R-COMPOSITION	RC 1/2T 4.7K-K/ERC-12GL 4	
⚠ R502H	31028-328-472	R-COMPOSITION	RC 1/2T 4.7K-K/ERC-12GL 4	
⚠ R503	31028-328-472	R-COMPOSITION	RC 1/2T 4.7K-K/ERC-12GL 4	
R504	31018-377-823	R-CARBON/METAL FILM	RD 1/2T 82K-J	
R505	31018-377-823	R-CARBON/METAL FILM	RD 1/2T 82K-J	
R506	31018-377-823	R-CARBON/METAL FILM	RD 1/2T 82K-J	
R507	31018-177-132	R-CARBON/METAL FILM	RD 1/8T 1.3K-J	
R508	31018-377-224	R-CARBON/METAL FILM	RD 1/2T 220K-J	
R509	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
R510	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
R511	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
R512	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R513	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R514	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R516	31018-377-105	R-CARBON/METAL FILM	RD 1/2T 1M-J	
R517	A1010-0065	R-FUSIBLE	RF 1 RT 010-J	
R602	31018-177-122	R-CARBON/METAL FILM	RD 1/8T 1.2K-J	
R605	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R606	31018-377-100	R-CARBON/METAL FILM	RD 1/2T 10-J	
R607	31018-377-100	R-CARBON/METAL FILM	RD 1/2T 10-J	
R608	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R701	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R702	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R703	31018-177-391	R-CARBON/METAL FILM	RD 1/8T 390-J	
R704	31018-177-153	R-CARBON/METAL FILM	RD 1/8T 15K-J	
R705	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R801	A1008-0017	R-METAL PLATE	RP 5 T R33-J	220V
R802	A1004-0405	R-METAL OXIDE	RS 2 RT(S) 100-J 10R	
R803	A1004-0405	R-METAL OXIDE	RS 2 RT(S) 100-J 10R	
⚠ R804	31028-328-475	R-COMPOSITION	RC 1/2T 4.7M-K/ERC-12GK 4	
⚠ R805	31028-328-475	R-COMPOSITION	RC 1/2T 4.7M-K/ERC-12GK 4	
R806	A1004-0414	R-METAL OXIDE	RS 2 RT(S) 752-J 7.5K	
R807	A1004-0431	R-METAL OXIDE	RS 2 RT(S) 103-J 10K	
R808	31018-377-432	R-CARBON/METAL FILM	RD 1/2T 4.3K-J	
R809	A1004-0437	R-METAL OXIDE	RS 2 RT(S) 270-J 27R	
R810	A1010-0065	R-FUSIBLE	RF 1 RT 010-J	
R811	31018-377-220	R-CARBON/METAL FILM	RD 1/2T 22-J	
R812	A1010-0069	R-FUSIBLE	RF 2 T 2R4-J	

Loc No	Parts No	Description	Specification	Remark
R813	A1010-0069	R-FUSIBLE	RF 2 T 2R4-J	
R814	A1000-0785	R-CARBON	RD 1/2 T(S) 430-J 43R	
R852	31018-377-100	R-CARBON/METAL FILM	RD 1/2T 10-J	
R901	31018-177-470	R-CARBON/METAL FILM	RD 1/8T 47-J	
R902	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R903	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R904	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R905	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R906	31018-377-103	R-CARBON/METAL FILM	RD 1/2T 10K-J	
R907	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
R908	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
R909	31018-177-332	R-CARBON/METAL FILM	RD 1/8T 3.3K-J/ERD-S2TJ 3	
R910	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R911	31018-177-563	R-CARBON/METAL FILM	RD 1/8T 56K-J	
R912	31018-177-681	R-CARBON/METAL FILM	RD 1/8T 680-J/ERD-S2TJ 68	
R913	31018-177-681	R-CARBON/METAL FILM	RD 1/8T 680-J/ERD-S2TJ 68	
R914	31018-177-470	R-CARBON/METAL FILM	RD 1/8T 47-J	
R915	31018-177-821	R-CARBON/METAL FILM	RD 1/8T 820-J	
R919	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R920	31018-177-752	R-CARBON/METAL FILM	RD 1/8T 7.5K-J	
R921	31018-377-106	R-CARBON/METAL FILM	RD 1/2T 10M-J	
R922	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R923	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R924	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R925	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R926	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R927	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R928	31018-377-103	R-CARBON/METAL FILM	RD 1/2T 10K-J	
R929	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R930	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R931	31018-177-113	R-CARBON/METAL FILM	RD 1/8T 11K-J	
R932	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R933	31018-177-151	R-CARBON/METAL FILM	RD 1/8T 150-J	
R935	31018-177-512	R-CARBON/METAL FILM	RD 1/8T 5.1K-J	
R936	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R937	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R939	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R940	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R941	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R942	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R943	31018-177-473	R-CARBON/METAL FILM	RD 1/8T 47K-J	
R944	31018-177-242	R-CARBON/METAL FILM	RD 1/8T 2.4K-J	
R947	31018-177-151	R-CARBON/METAL FILM	RD 1/8T 150-J	
R950	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R951	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R952	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R953	31018-177-100	R-CARBON/METAL FILM	RD 1/8T 10-J	
RB01	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
RK06	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
⚠ RL901	A1294-0035	MODULE-REMOCON	ORC-50VF 38KHZ 940 ST	
RT01	31018-177-273	R-CARBON/METAL FILM	RD 1/8T 27K-J	
RT05	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RT07	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RT08	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	

Loc No	Parts No	Description	Specification	Remark
RT09	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
RT10	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
RT11	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
RT12	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
RW701	B1018-0051	R-NETWORK	RN 1/8 CB 6P 33K/24K/75RX	
RW702	B1018-0050	R-NETWORK	RN 1/8 CA 5P 75RX3/1K-J T	
RW902	A1018-0087	R-NETWORK	RN 1/8 X 4P 472-J ANR4PX4	
⚠ RX801	31028-328-334	R-COMPOSITION	RC 1/2T 330K-K/ERC-12GK 3	
SFK01	34529-700-015	FILTER-SAW	K3255K	
SW801	A3002-0014	SW-PUSH,PWR	250V5A UL/CSA JPW2104B ST	MASTER
SW901	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW902	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW903	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW904	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW905	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
⚠ T201	A1190-0012	TRANS-VIF	38.9MHZ 0.65UH 7MG VIF ST	
⚠ T401	32846-070-007	TRANS-HORIZ,DRIVE	7.3MH/105UH ST	
⚠ T444	A1201-0033	TRANS-FLYBACK	FSV-20A001 20INCH 125V	
⚠ T801	A1206-0090	TRANS-SWITCHING	P:160-280V S:125/12.5V ST	220V
⚠ TK01	32717-513-800	TRANS-VIF	38.9MHZ(S-60)	
⚠ TU01	B1292-0082	TUNER	TELE4-003A 181CH PAL VS	HYPER
⚠ V999	A3047-0010	SOCKET-CRT	ISHS09S P125.5 HI-FOCUS 9	
VR301	31249-128-005	VR-SEMI	EVN DJA A03 B53/EVN CYA A	
VR302	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
X201	B1283-0059	RESONATOR-CERAMIC	503KHZ CSB503F18 FC D M52	
X203	A1280-0173	CRYSTAL	4.433619MHZ(M) HC-49/U-A	
X901	34537-071-050	CRYSTAL	12MHZ	
Z201	34527-460-004	FILTER-CERAMIC	TPS5.5MB TF21	
ZB01	34527-460-030	FILTER-CERAMIC	SFSH5.5MCB-TF21	
	ASSY-H/S,SOUND			
	* 3H81-00320-000	ASSY-H/S,SOUND	31124-0025-000 TDA7056	
⚠ IC601	B4012-0472	IC-LINEAR	TDA7056/N2 SIP POWER AMP	
	ASSY-H/S,SOUND			
	* 3H81-00320-001	ASSY-H/S,SOUND	31124-0025-000 TDA6103Q	
⚠ IC501	B4012-0359	IC-LINEAR	TDA6103Q SIP 9P VIDEO	
	ASSY-H/S,VERT			
	* 3H82-00520-011	ASSY-H/S,VERT	31124-0013-000 TA8445K RO	
⚠ IC301	32119-110-010	IC	TA8445K	
	ASSY-H/S,VERT(HORI)			
	* 3H82-00530-002	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5072YD	
⚠ Q401	32139-410-020	TRANSISTOR	KSD5072YD	
	ASSY-H/S,POWER			
	* 3H83-00820-003	ASSY-H/S,POWER	31122-0027-000,SMR40200,C	
⚠ IC801	A4010-0080	IC-HYBRID	SMR40200 SMPS-SW SIP BULK	
	ASSY-H/S,POWER			
	* 3H83-00850-000	ASSY-H/S,POWER	31124-0029-000 FMLG12	
⚠ D803	32169-101-090	DIODE	FML-G12,S	

Loc No	Parts No	Description	Specification	Remark
	ASSY-H/S POWER			
	• 3H83-00870-000	ASSY-H/S POWER	31124-0032-000 TDA8133	
⚠1 IC802	B4008-1162	IC-S/W REGU	TDA8133 SIP 7P	
	ASSY-CRT			
	CRT-COLOR			LOCAL
	ASSY-A/V,FRONT			
	• 3E39-00001D440	ASSY-A/V,FRONT	PV1 3W 9P	
PCB	36029-0409-000	P.C.B-A/V FRONT	1.6T 51X29	S.N.A
CE01	31607-402-250	C-ELECTROLYTIC	CE04W TAPG 50V 10M	
CE02	A1100-0990	C-CERAMIC	CK OA X7R 16V T 222-M EP0	
CE03	31607-402-530	C-ELECTROLYTIC	CE04W TAPG 50V 0.47U-NP	
CE06	A1100-0798	C-CERAMIC	CK OA Y5P 50V T 101-K UP0	
CE07	A1100-0798	C-CERAMIC	CK OA Y5P 50V T 101-K UP0	
CE08	A1100-0798	C-CERAMIC	CK OA Y5P 50V T 101-K UP0	
CN702	36434-0050-000	CONNECTOR ASSY	B9XS9 200MM 1007#26	
JA702	A3040-0187	JACK-PIN,BLOCK	PI3.5 V-MINI 2P ST S/W	
JE601	33339-521-070	JACK-HEADPHONE	SHQ9085-01-010	
LE01	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
LE04	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
LE05	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
LE06	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
QE01	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
RE01	31018-377-470	R-CARBON/METAL FILM	RD 1/2T 47-J	
RE02	31018-377-470	R-CARBON/METAL FILM	RD 1/2T 47-J	
RE03	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
	ASSY-TRANSMITTER			
	• 3F14-00042-050	ASSY-TRANSMITTER	TM42,RM149PV,E,39,SS,BLK	
	ASSY-SPEAKER			
	33058-121-024	CONNECTOR ASSY	S3(2)XREC 600MM 1007#26	
	A1300-0067	SPEAKER-GENERAL	3W 16OHM 110X42 114CR03A	
	ASSY-ACCESSORY			
	34719-035-410	BATTERY	AAM-1.5V(R6)	
	35212-0008-000	BAG-PE	LDPE T0.05 W240 L400 L-TY	

CB5073Z/UKVCX OPTION

ASSY-PWB,MAIN(COMMON)

BUYER : SEMUK (SEG)

Loc No	Parts No	Description	Specification	Remark
	• 3X30-02629Y010	ASSY-PWB,MAIN(COMMON)	CB5073Z/UKVCX PV1 SEMUK	S.N.A
C205	A1100-0803	C-CERAMIC	CG OA Y5V 25V T 103-Z TP0	
C223	A1102-0291	C-FILM	CF 922 N 63V T 224-J -40/	
C224	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C225	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C227	A1100-0803	C-CERAMIC	CG OA Y5V 25V T 103-Z TP0	
C306	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C401	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
C908	31417-104-560	C-CERAMIC,HK	CK45 TAPG B 50V 561-K	
C910	A1102-0291	C-FILM	CF 922 N 63V T 224-J -40/	
C918	31407-105-300	C-CERMAIC,TEMP	CC45(T) CH 50V 680-J	
D905	32167-406-480	DIODE	1N4148 TAPG	
D909	32167-406-480	DIODE	1N4148 TAPG	
IC203	B4012-0469	IC-LINEAR	TDA8395P/N2 DIP BULK SECA	
IC901	B4002-0746	IC-MCU	Z8933212PSC-R2021(SZM-143	
J279	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
L203	32427-904-922	COIL-PEAKING	AL02-5R6K	
L204	32427-805-877	COIL-PEAKING	2.2UH K AL02 2R2K	
L801	32426-633-090	COIL-LINE,FILTER	39MHX2(U) ST	
L903	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
⚠ P801	32186-609-430	POSISTOR	2C14R(D) ST	
⚠ POWER	A6006-0252	POWER-CORD	KKJ-1004A H03VVH2-F(2X0.7	
R222	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
R304	31018-377-221	R-CARBON/METAL FILM	RD 1/2T 220-J	
R309	31018-177-823	R-CARBON/METAL FILM	RD 1/8T 82K-J	
⚠ R417	31057-201-025	R-FUSIBLE	RF 1T 0.47-K/RF 1S 0.47-K	
R605	31018-177-512	R-CARBON/METAL FILM	RD 1/8T 5.1K-J	
R809	A1004-0428	R-METAL OXIDE	RS 2 RT(S) 470-J 47R	
R907	31018-177-821	R-CARBON/METAL FILM	RD 1/8T 820-J	
R908	31018-177-132	R-CARBON/METAL FILM	RD 1/8T 1.3K-J	
R909	31018-177-512	R-CARBON/METAL FILM	RD 1/8T 5.1K-J	
R916	31018-177-331	R-CARBON/METAL FILM	RD 1/8T 330-J/ERD-S2TJ 33	
R917	31018-177-331	R-CARBON/METAL FILM	RD 1/8T 330-J/ERD-S2TJ 33	
R918	31018-177-331	R-CARBON/METAL FILM	RD 1/8T 330-J/ERD-S2TJ 33	
R924	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R934	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
R944	31018-177-273	R-CARBON/METAL FILM	RD 1/8T 27K-J	
R945	31018-377-106	R-CARBON/METAL FILM	RD 1/2T 10M-J	
R948	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R949	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
RU01	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
⚠ TU01	B1292-0101	TUNER	TELE4-016A 181CH PAL V/S	
X901	B1280-0053	CRYSTAL	32.768KHZ P3 20PPM	
ZB01	B1243-0072	FILTER-CERAMIC	BP 5.5M/6.5M EFCT2F13YS5	

Loc No	Parts No	Description	Specification	Remark
	A1008-0017	R-METAL PLATE	RP 5 T R33-J	
	B4000-0135	IC-EEPROM	AT24C04-10PC DIP 8P	

ASSY-TRANSMITTER

*	3F14-00038-321	ASSY-TRANSMITTER	TM38RM137PV EO STD L/GRY	

CB5073T/UKV2CX OPTION

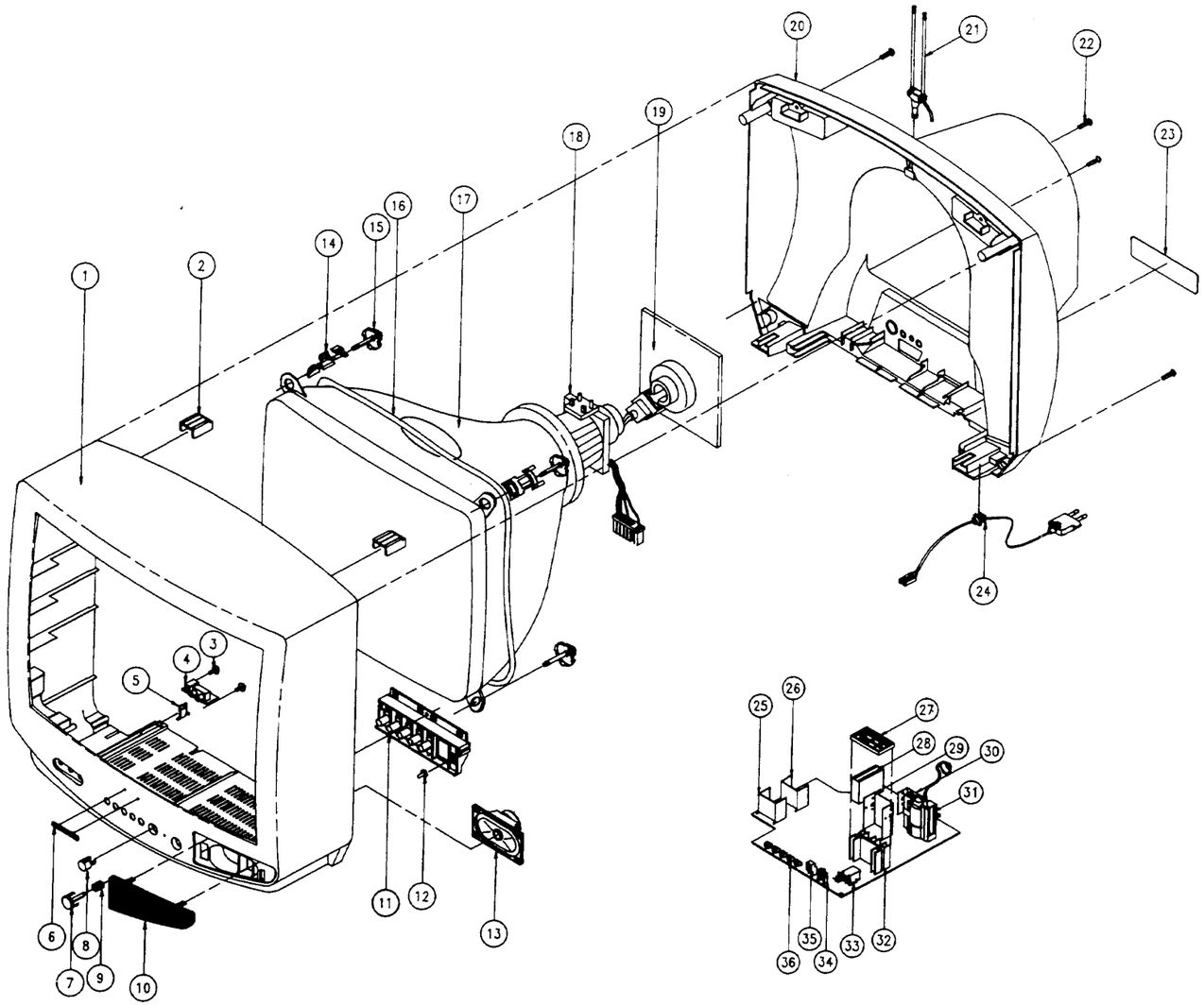
ASSY-PWB,MAIN(COMMON)

BUYER : SEMUK (SEI)

*	3X30-02622Y020	ASSY-PWB,MAIN(COMMON)	CB5073T/UKV2CX PV1 SEMUK	S.N.A
	B4000-0135	IC-EEPROM	AT24C04-10PC DIP 8P	
IC901	B4002-0792	IC-MCU	SAA5290ZP-020 CTV SDIP BU	

6. Exploded Views and Parts List

6-1 Exploded View and Parts List



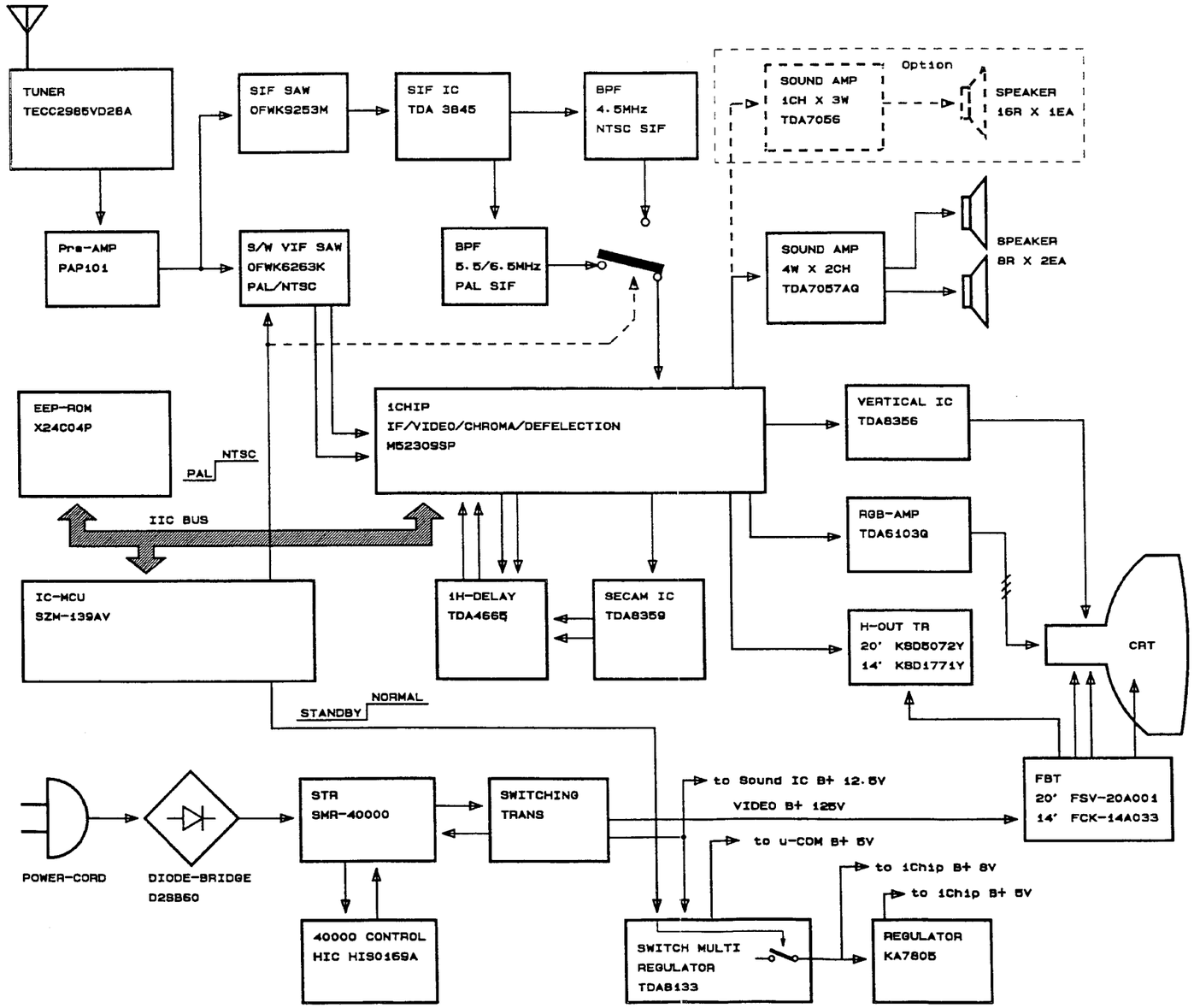
CB5073T/UKV1CX

The items with "•" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

•S.N.A=SERVICE NOT AVAILABLE.• •LOCAL=LOCAL PURCHASE•

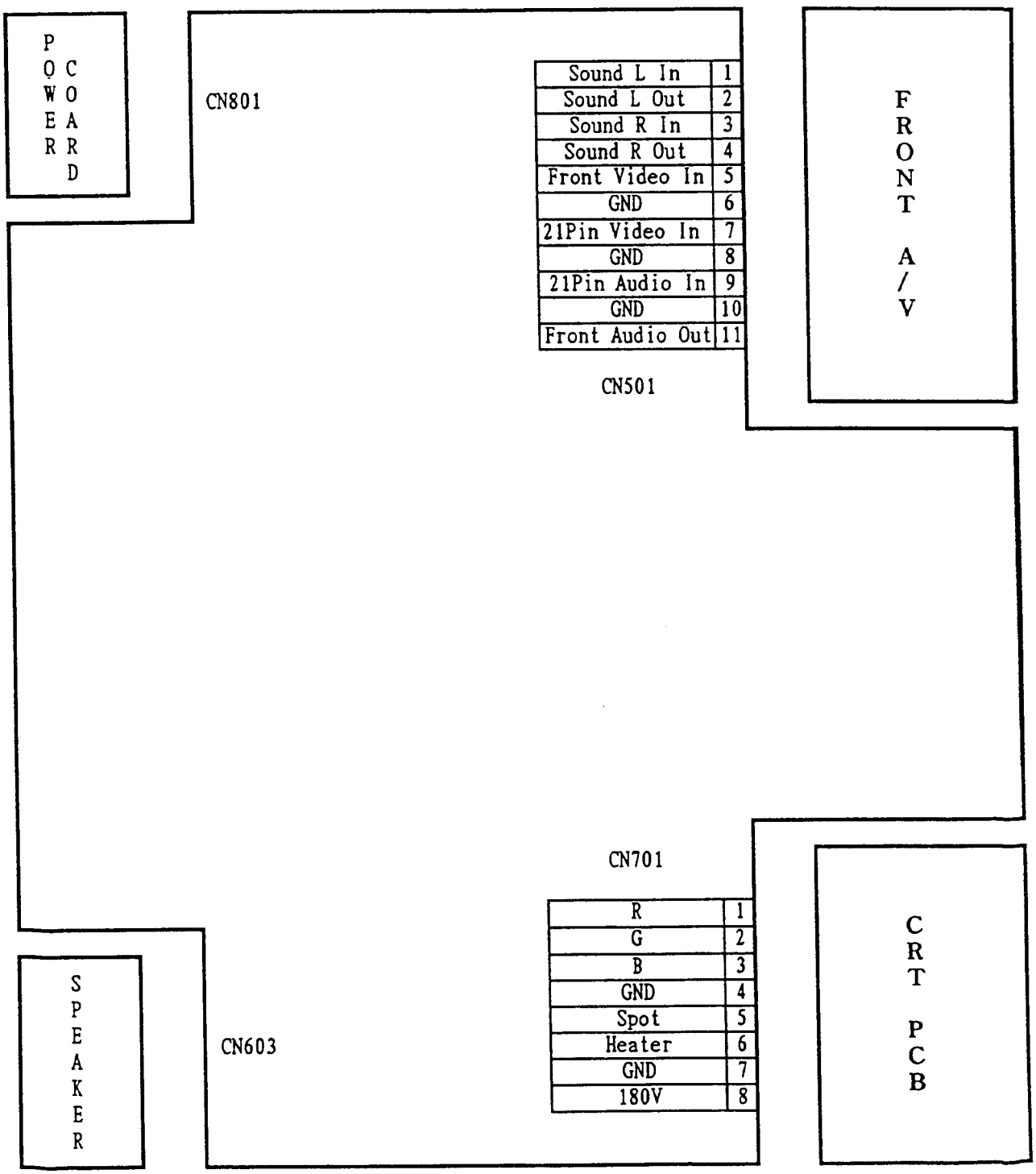
No	Code No	Description	Specification	Remarks	Q'TY
1	•3Y90-50730-050	ASSY-CABINET,FRONT	CB5073T/UKV1CX	*S.N.A*	1
	32001-0129-060	CABINET-FRONT	HIPS HB BLK PA100 SYMBOL	*LOCAL PURCHASE*	1
2	33113-0003-001	BOSS-CABINET(WING)	HIPS HB NATURAL		2
3	37144-001-210	SCREW-TAP,RH	2S-4X12XPI14 FE FZY		2
4	•3E39-00001-440	ASSY-A'',FRONT	PV1 3W		1
5	33383-0002-000	STOPPER-PCB	ABS HB NTR 5038 5368		1
6	34533-0079-010	BADGE-BRAND	AL FORGING T1.4 L45 S/S S		1
7	34083-0179-000	KNOB-POWER	ABS HB BLK CT-5073		1
8	34073-0076-000	WINDOW-REMOTE	PC V0 PRP CT-5073		1
9	36674-140-850	SPRING-COIL	SUS 0.05 CX-5322T		1
10	34003-0070-000	GRILLE-WOOFER	SECC T0.5 3R 0.6 PA-100 C		1
11	34082-0178-000	KNOB-CONTROL	ABS HB BLK CT-5073	*LOCAL PURCHASE*	1
12	34164-0039-000	INDICATOR-LED	PMMA HB CLR CT-5073		1
13	A1300-0067	SPEAKER-GENERAL	3W 16OHM 110X42 114CR03A		1
14	36635-112-110	CLAMPER-D.COIL	NYLON 6.6 DONG-A DADH-460		4
15	37124-100-830	SCREW-CRT	RH5X35 FE FZY		4
16	A1149-0011	COIL-DEGAUSSING	20INCH 15OHM T70 L2300MM		1
17		CRT-COLOR		*LOCAL PURCHASE*	1
18	32439-310-029	DEFL-YOKE	DSE-1992LL(1)		1
19	A3047-0010	SOCKET-CRT	1SHS09S PI25.5 HI-FOCUS 9		1
20	32001-0130-020	CABINET-BACK	HIPS V0 BLK NON-PBDE 5038	*LOCAL PURCHASE*	1
21		ANTENNA-ROD		*LOCAL PURCHASE*	1
22	37148-540-153	SCREW-TAP,RH	2S-4X15 FE FZB		4
23		CABINET-BACK,OPTION			1
24	A6006-0252	POWER-CORD	KKJ-1004A H03VVH2-F(2X0.7		1
25	•3H81-00320-000	ASSY-H/S,SOUND	31124-0025-000 TDA7056	*IC601*	1
26	•3H83-00830-001	ASSY-H/S,POWER	31124-0031-000 TDA8133	*IC803*	1
27	33314-0049-000	COVER-HEATSINK	PC/ABS V0 NATURAL		1
28	A1292-0075	TUNER	TECC2985VD28A 105CH PAL V		1
29	•3H82-00610-000	ASSY-H/S,VERT	31124-0024-000 TDA8356	*IC301*	1
30	•3H82-00530-002	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5072YD	*Q401*	1
31	A1201-0047	TRANS-FLYBACK	FCK-14A033 14INCH 125V		1
32	•3H83-00820-001	ASSY-H/S,POWER	31122-0027-000 SMR40000 C	*IC801*	1
33	A3002-0014	SW-PUSH,PWR	250V5A UL/CSA JPW2104B ST		1
34	•3H77-00001-070	ASSY-LED,GUIDE	32309-121-005,DL-G5RGA		1
35	A1294-0035	MODULE-REMOCON	ORC-50VF 38KHZ 940 ST		1
36	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1		5

8. System Block Diagram



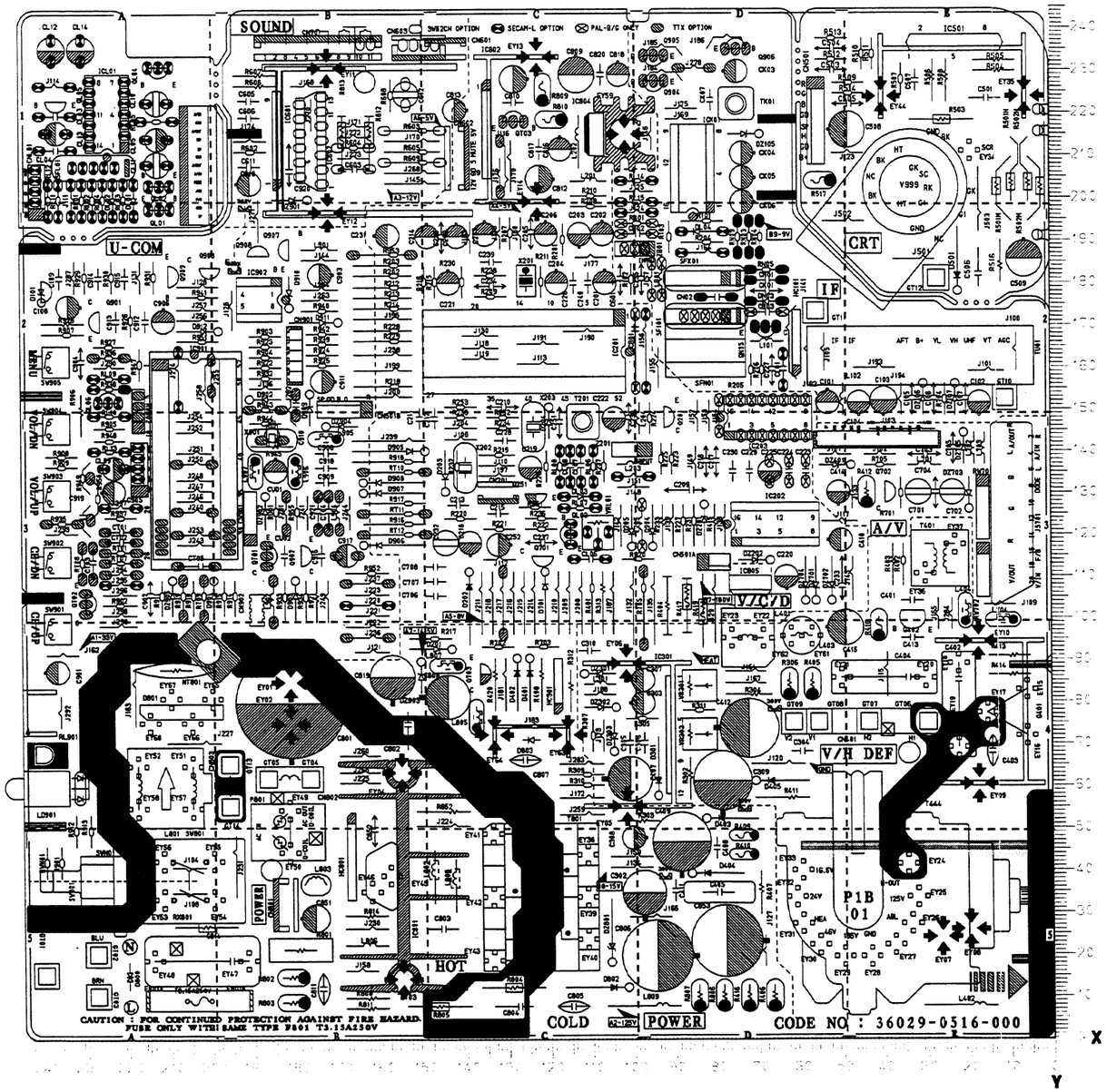
10. Wiring Diagram

Wiring Diagram



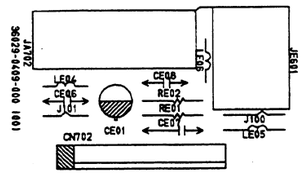
9. PCB Layout Diagram

9-1 PCB-Main



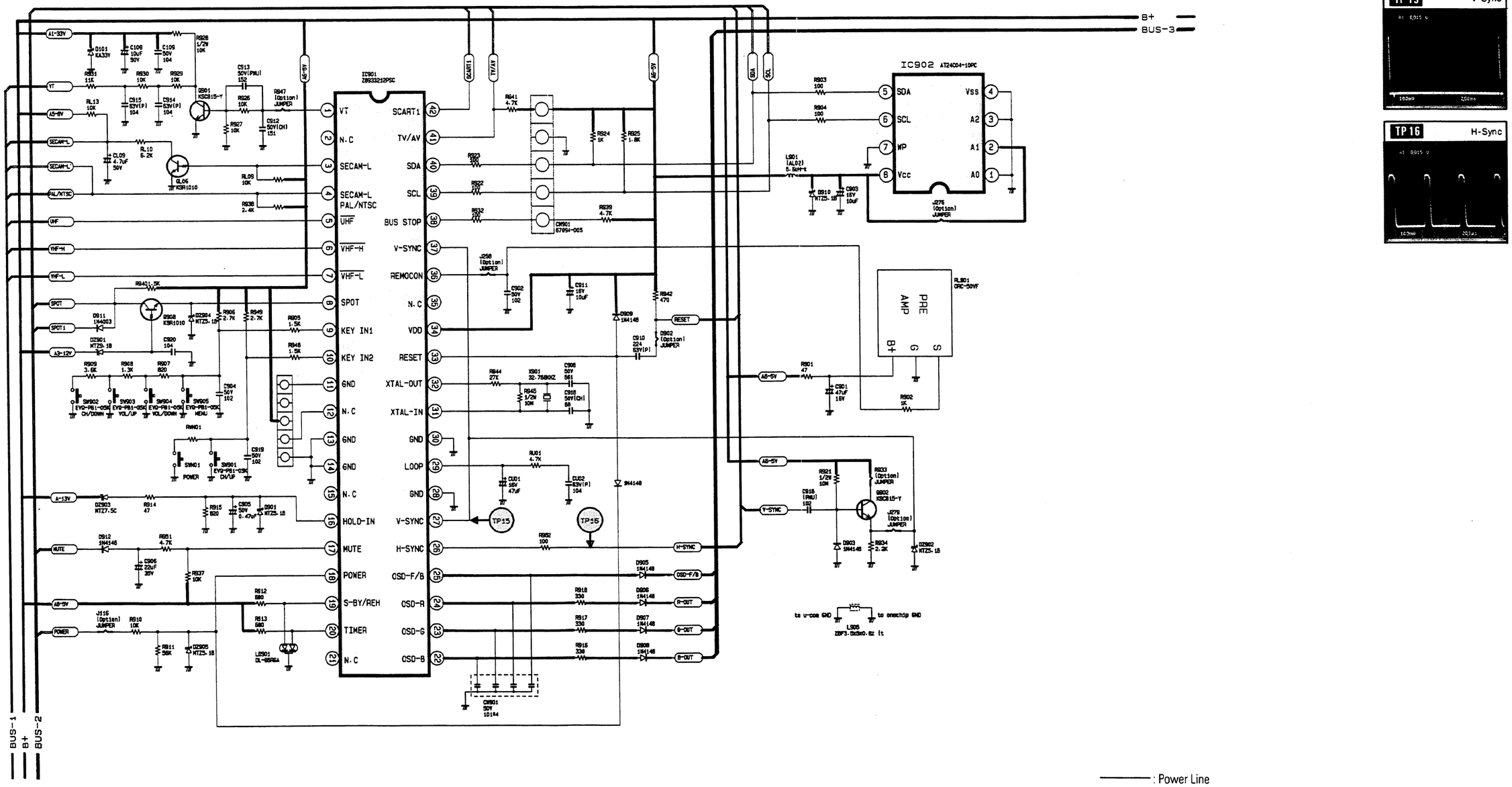
LOC NO	X	Y	LOC NO	X	Y
DIODE			I C		
D101	240	176	HC101	60	160
D201	143	93	HC301	118	79
D202	139	112	HC801	167	53
D203	144	131	IC201	103	156
D204	120	151	IC202	75	127
D205	100	118	IC203	76	153
D301	94	58	IC301	102	90
D401	125	91	IC501	40	224
D402	128	91	IC801	183	204
D403	83	53	IC802	172	197
D404	86	40	IC801	155	15
D405	71	62	IC802	122	200
D501	22	179	IC804	101	216
D701	121	112	IC805	74	108
D800	220	19	IC901	195	161
D801	215	76	IC902	184	173
D802	102	13	ICK01	89	199
D803	127	71	ICL01	228	213
D901	199	110	TRANSISTOR		
D902	190	153	Q201	92	146
D903	180	110	Q251	125	130
D904	95	118	Q401	18	95
D905	149	141	Q402	36	101
D906	164	118	Q701	124	115
D907	164	131	Q702	39	128
D908	164	133	Q703	136	85
D909	176	154	Q901	226	174
D910	181	175	Q902	178	113
D911	169	171	Q903	202	184
D912	198	169	Q904	97	228
DL01	218	197	Q905	97	234
DL02	223	197	Q906	72	236
DL03	109	130	Q907	181	191
DL04	88	193	Q908	186	187
DN03	71	176	Q909	210	180
DZ105	69	216	QL01	209	198
DZ106	30	157	QL02	214	204
DZ107	23	157	QL03	115	123
DZ201	83	128	QL04	214	232
DZ202	67	114	QL05	239	224
DZ301	112	87	QL06	222	152
DZ302	104	79	QN05	70	170
DZ303	105	69	QT01	187	113
DZ401	48	137	QT02	230	102
DZ701	56	105	QT03	125	219
DZ702	52	105			
DZ703	20	127			
DZ704	59	105			
DZ705	21	145			
DZ801	106	19			
DZ901	176	200			
DZ902	187	130			
DZ903	150	90			
DZ904	172	147			
DZ905	209	110			

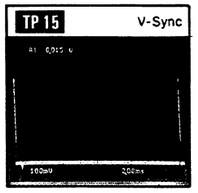
PCB-A/V Front



11. Schematic Diagrams

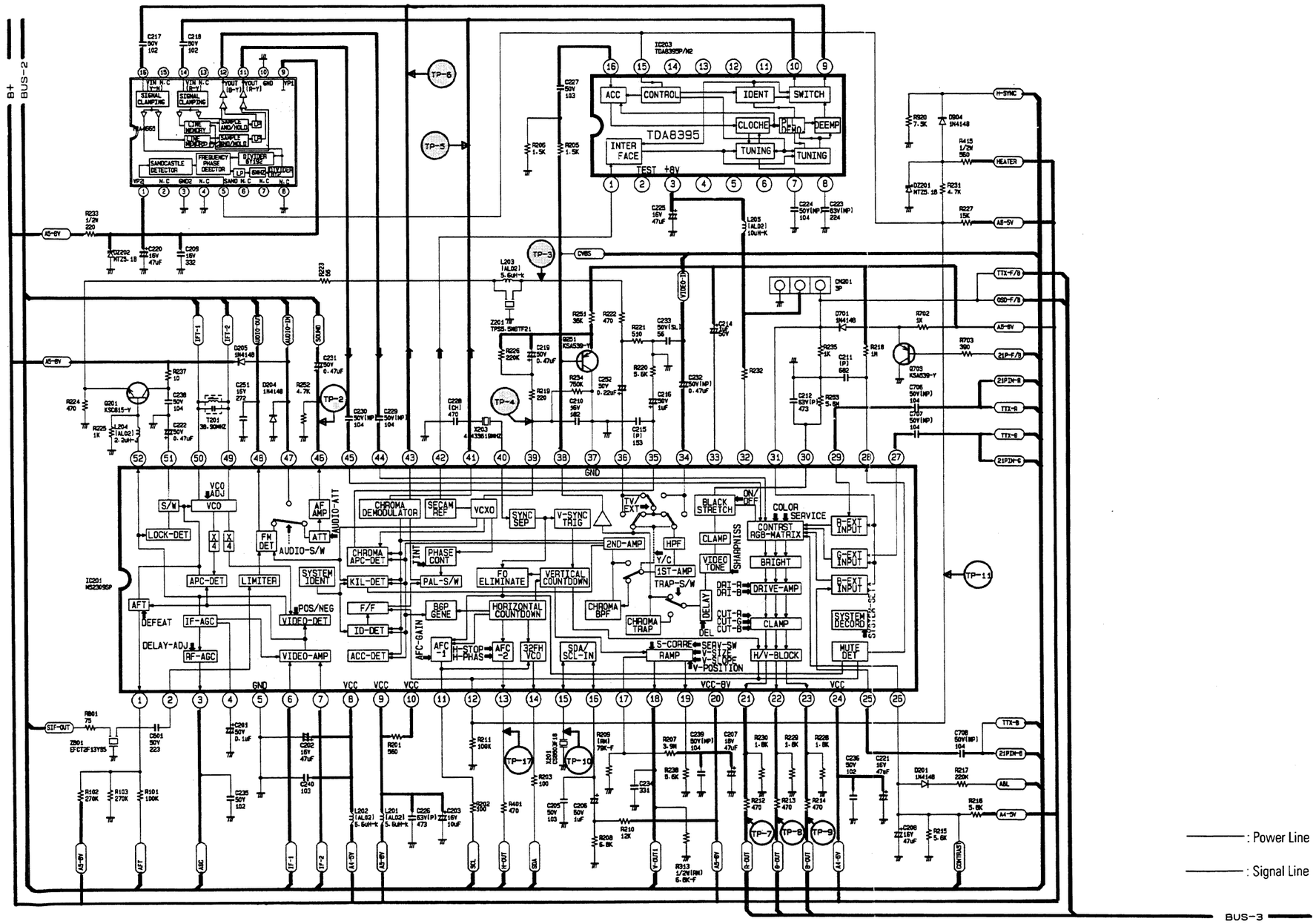
11-1 W/O TTX Micom





: Power Line

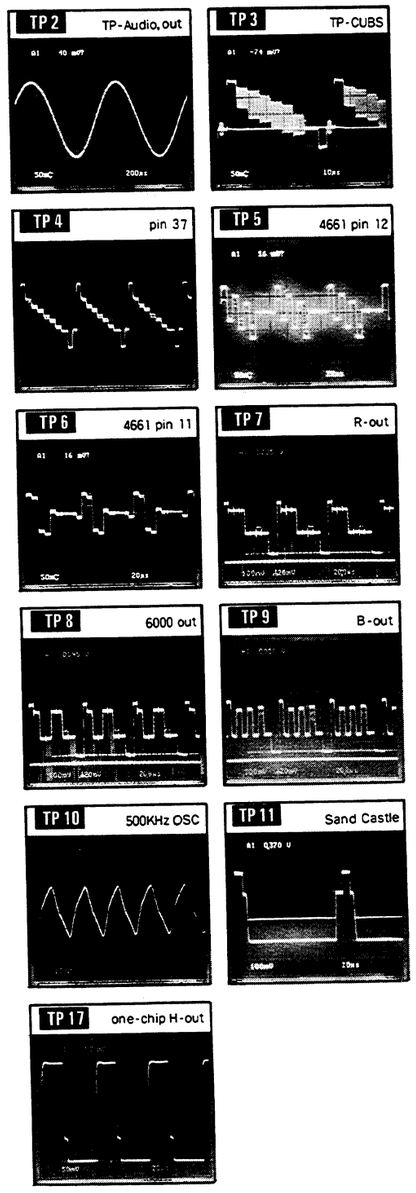
: Signal Line

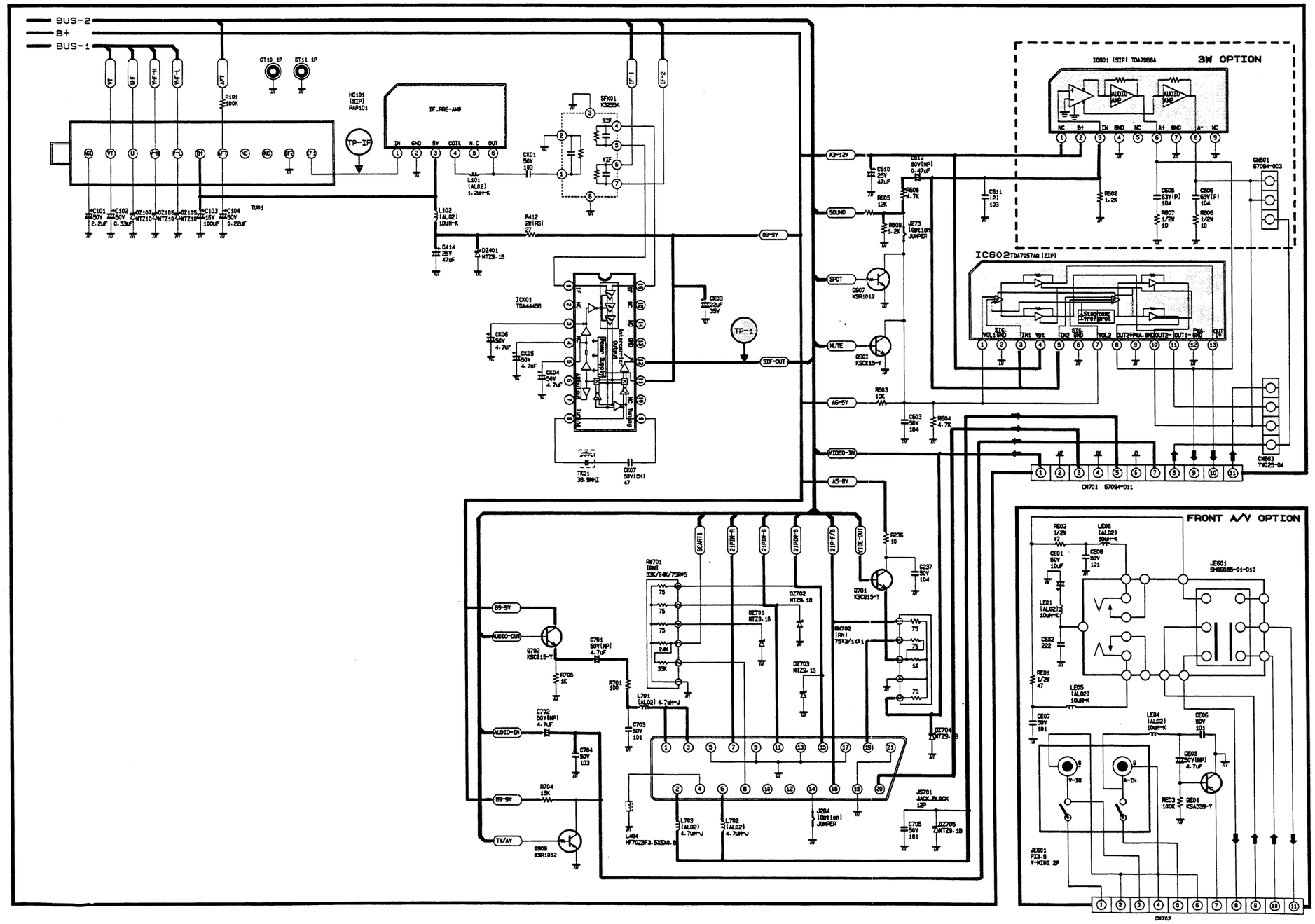


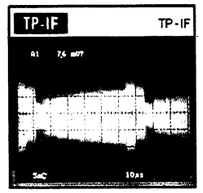
: Power Line

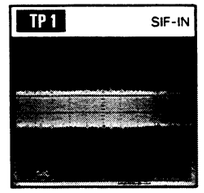
: Signal Line

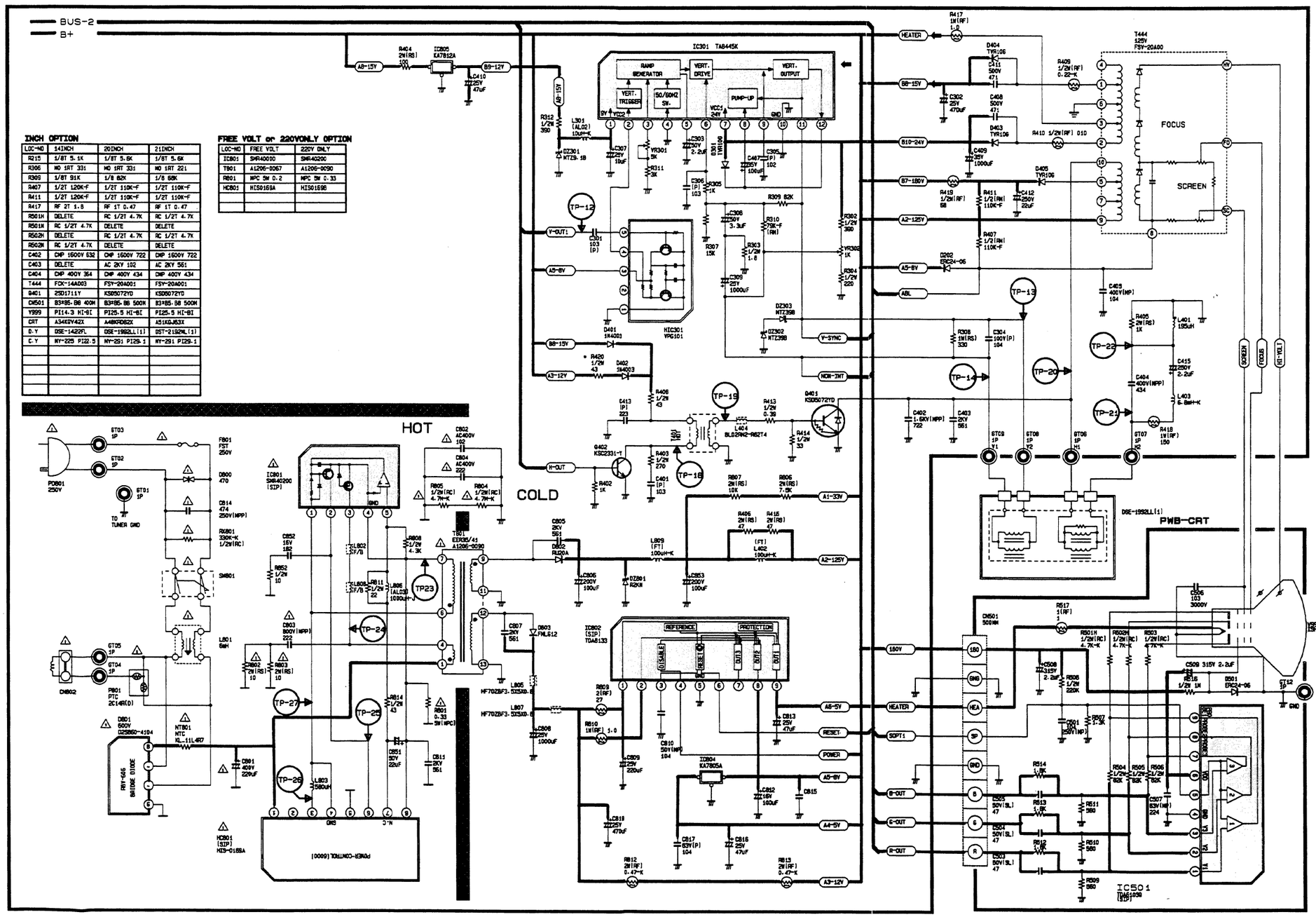
BUS-3



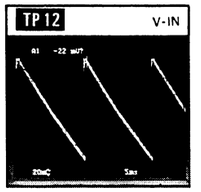

BUS-2
B+
BUS-1
TP-IF
IF_PRE-AMP
TU01
IC601
TDA4445B
IC602 TDA7057AQ (ZIP)
3W OPTION
FRONT A/V OPTION
TP-I
TP-SIF
A3-12V
SOUND
SPOT
MUTE
A5-9V
VIDEO-IN
B5-9V
SIF-OUT
AUDIO-OUT
AUDIO-IN
TV/AV
: Power Line
: Signal Line


TP-IF
TP-IF

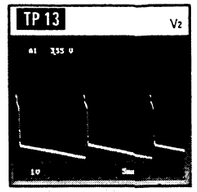

TP 1
SIF-IN



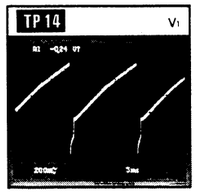
TP 12 V-IN



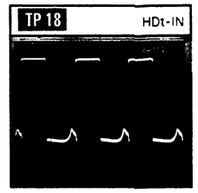
TP 13 V_2



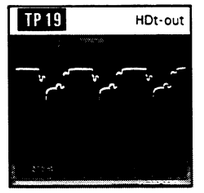
TP 14 V_1



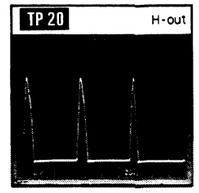
TP 18 HDt-IN



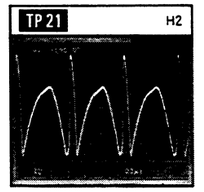
TP 19 HDt-out



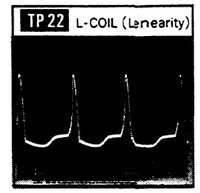
TP 20 H-out



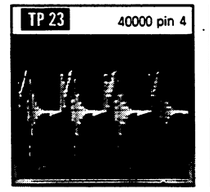
TP 21 H2



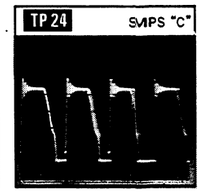
TP 22 L-COIL (Lenearity)



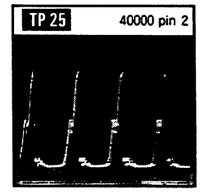
TP 23 40000 pin 4



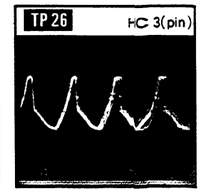
TP 24 SMPS "C"



TP 25 40000 pin 2



TP 26 HC 3(pin)



TP 27 40000 pin 4